

<b>SOLICITATION, OFFER AND AWARD</b>			<b>1. This Contract Is A Rated Order Under DPAS (15 CFR 700)</b>		<b>Rating</b> DXA4	<b>Page</b> 1 <b>of</b> 99
<b>2. Contract No.</b>		<b>3. Solicitation No.</b> DAAE07-00-R-N061		<b>4. Type of Solicitation</b> Negotiated (RFP)	<b>5. Date Issued</b> 2000MAR08	<b>6. Requisition/Purchase No.</b> SEE SCHEDULE
<b>7. Issued By</b> TACOM AMSTA-LC-CAPA-G WARREN, MICHIGAN 48397-5000			<b>Code</b> W56HZV	<b>8. Address Offer To (If Other Than Item 7)</b> US ARMY TACOM ACQUISITION CENTER ATTN: AMSTA-AQ-DE / BID OPENING WARREN, MI 48397-5000 E-MAIL: OFFERS@TACOM.ARMY.MIL		

**SOLICITATION** NOTE: In sealed bid solicitations offer and offeror mean bid and bidder .

**9. Sealed offers in original and** 1 Signed **copies for furnishing the supplies or services in the Schedule will be received at the place specified in item 8, or if handcarried, in the depository located in** SEE EXECUTIVE SUMMARY, PAGE 2 **until**                      **(hour) local time** 2000MAY08 **(Date).**

**Caution - Late Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.**

<b>10. For Information Call:</b>	<b>Name</b> FREDRICK T. SEEBURGER <b>E-mail address:</b> SEEBURGR@TACOM.ARMY.MIL	<b>Telephone No. (Include Area Code) (NO Collect Calls)</b> (810) 574-8096
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**11. Table Of Contents**

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**OFFER (Must be fully completed by offeror)**

**NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.**

**12. In compliance with the above, the undersigned agrees, if this offer is accepted within**        **calendar days (60 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.**

**13. Discount For Prompt Payment**  
(See Section I, Clause No. 52.232-8)

<b>14. Acknowledgment of Amendments (The offeror acknowledges receipt of amendments to the Solicitation for offerors and related documents numbered and dated:</b>	<b>Amendment Number</b>	<b>Date</b>	<b>Amendment Number</b>	<b>Date</b>

<b>15A. Contractor/Offeror/Quoter</b>		<b>Code</b>	<b>Facility</b>	<b>16. Name and Title of Person Authorized to Sign Offer (Type or Print)</b>	
<b>15B. Telephone Number (Include Area Code)</b>		<b>15C. Check if Remittance Address is</b> <input type="checkbox"/> <b>Different From Blk 15A- Furnish Such Address In Offer</b>		<b>17. Signature</b>	<b>18. Offer Date</b>

**AWARD (To be completed by Government)**

<b>19. Accepted As To Items Numbered</b>		<b>20. Amount</b>	<b>21. Accounting And Appropriation</b>		
<b>22. Authority For Using Other Than Full And Open Competition:</b> <input type="checkbox"/> 10 U.S.C. 2304(c)( ) <input type="checkbox"/> 41 U.S.C. 253(c)( )			<b>23. Submit Invoices To Address Shown In</b> (4 copies unless otherwise specified)		<b>Item</b>
<b>24. Administered By (If other than Item 7)</b>			<b>Code</b>	<b>25. Payment Will Be Made By</b>	
SCD PAS ADP PT					
<b>26. Name of Contracting Officer (Type or Print)</b>			<b>27. United States Of America</b>  (Signature of Contracting Officer)		<b>28. Award Date</b>

**IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.**

<p style="text-align: center;"><b>CONTINUATION SHEET</b></p>	<p style="text-align: center;"><b>Reference No. of Document Being Continued</b></p> <p style="text-align: center;">PIIN/SIIN DAAE07-00-R-N061      MOD/AMD</p>	<p style="text-align: center;"><b>Page 2 of 99</b></p> <p style="text-align: center;">REPRINT</p>
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**Name of Offeror or Contractor:**

SECTION A - SUPPLEMENTAL INFORMATION

	Regulatory Cite	Title	Date
A-1 (a)	TACOM <u>Background and Description of Acquisition:</u>	EXECUTIVE SUMMARY - COST-TYPE SOLICITATION	MAR/1998

General:

This solicitation requests proposals for the development phase of the Abrams Crusader Common Engine (ACCE) Program. The Army is seeking a new Abrams Tank propulsion system and a Crusader Artillery System power pack that employ, at a minimum, a common engine. Although commonality in manufacturing offers desirable economies, the primary goal of commonality is to reduce maintenance and support burdens of our Soldiers in the field.

The Government desires Abrams and Crusader solutions that not only address the common Abrams-Crusader engine, but also detail system integration, two-level maintenance procedures, supply approaches, field modification strategies, and other innovations that yield a robust, affordable, and supportable program at acceptable risk. The Government is providing offerors program level cost, schedule, and performance objectives for each system. Proposals will describe an approach and corresponding contract scope of work that provide the means for the Army to achieve its overall program objectives. The Army will evaluate the contribution of each proposal towards those objectives and select the approach that can realistically provide the best overall value.

Although the Army will evaluate each approach on its ability to achieve the overall program objectives, the initial contract award resulting from this RFP will be for development of the common engine for Abrams and Crusader. In addition, at the Government's option, this contract may also award development and integration for the balance of the Abrams propulsion system. However, for Crusader the Army's intent is for the balance of the power pack development to be contracted through UDLP with a directed subcontract for transmission development to the offeror selected in response to this RFP.

In order to achieve Abrams Tank Operations and Support (O&S) cost savings, the ease and cost of field application for Abrams will be critical design parameters. For Abrams, all tanks going through production, retrofit, or overhaul at the Lima Army Tank Plant (LATP) will receive the new propulsion system at LATP. These numbers are inadequate to proliferate the new propulsion system quickly enough to yield sufficient O&S cost savings; therefore, field applications of this propulsion system modification will also be required. The offeror should plan to apply their solution with the minimal unit disruption, using contractor labor, and tools and machinery available at a typical Army General Support maintenance facility (or commercial equivalent) in the vicinity of the unit. For Crusader, the offeror will assume that all Crusader power packs will be installed during production in a contractor operated production facility.

Program Objectives:

- The Army's primary program objectives are to develop a propulsion system/power pack solution which:
- a. Significantly reduces the Operations and Support (O&S) cost burden of the Abrams Tank equipped with the existing AGT 1500 engine. The Army specifically established a long-term funding stream for the development, integration, production, and application of an Abrams Tank Propulsion System solution targeted at reducing the O&S burden of the existing system by obtaining a significant net savings.

b. Significantly contributes to the Crusader system weight reduction requirements. The Army mandated design changes to make the Crusader Artillery System significantly lighter and smaller to improve its deployability and applicability to the Army's new vision. Since the weight of the power pack is a primary driver in reducing the overall system weight, the goal of the Crusader program is to achieve a total "wet weight" of the engine, transmission, cooling system and on-board fuel of 8500 lbs as described at Attachment 5, Enclosure F, para. 3.2.2.2.1. Proposed solutions which exceed the weight of 10,000 lbs., will not be considered.

c. Includes an engine that optimizes commonality between the Abrams and Crusader systems. The optimum common solution will maximize the operational and logistics benefit to the war-fighter. Such benefits include fewer and interchangeable Authorized Stock List (ASL) items, common training, common Test and Measurement Devices, etc.

d. Leverages commercial/military technologies to provide a low risk transition to production. The Army does not have the budget or the time to implement a traditional full scale development effort. Therefore, the Army is not seeking solutions that push the technological envelope at the expense of production risk.

Program Phases:

<p style="text-align: center;"><b>CONTINUATION SHEET</b></p>	<p style="text-align: center;"><b>Reference No. of Document Being Continued</b></p> <p style="text-align: center;">PIIN/SIIN DAAE07-00-R-N061      MOD/AMD</p>	<p style="text-align: center;"><b>Page 3 of 99</b></p> <p style="text-align: center;">REPRINT</p>
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**Name of Offeror or Contractor:**

The Army will execute the ACCE Program in two phases. The first phase will be for the development, fabrication, integration, application and testing of prototype systems, along with the required logistics, technical, and prototype test support. The goal of Phase I is to prove-out the integration, ease of application, performance and reliability of the propulsion system/power pack design against the specification and vehicle system level mobility requirements prior to a production commitment.

The second phase of the program will be for production and logistic support. The total projected future Abrams fleet requirement is approximately 2,845 units over 8 years, beginning in FY03. The Crusader program intends to acquire units for follow-on Engineering Manufacturing Development (EMD) (estimated at 18 units beginning in FY03), and production (estimated at 755 units over 6 years beginning in FY06). The detailed production schedules are at Attachment 2 of the solicitation.

To encourage creativity and innovation, offerors will be given wide degree of latitude to propose solutions that can best balance the Army's objectives for O&S savings, weight reduction, and commonality, while satisfying the technical performance requirements at an acceptable level of risk. The Government will evaluate the risks, merits and costs of each offeror's proposal considering its total impact to the Army.

The Government intends to only award Phase I of the program under this action. Offerors should read Attachment 1; "Acquisition Process", for a more detailed account of the Army's acquisition strategy for award of Phase I before continuing into this solicitation package.

**NOTE: DISTRIBUTION STATEMENT D**

Distribution of data is authorized to the Department of Defense and U.S. D.O.D contractors only. Only contractors who have been approved to receive Distribution D material will be authorized to obtain the CD-ROM attachments for this solicitation. This determination was made on 01 July 1999. Other requests shall be referred to USA TACOM, AMSTA-LC-CAPA (Mr. Seeburger), Warren , MI 48397-5000

WARNING: This document contains technical data whose export is restricted by the Arms Export Control Act (Title22, U.S.C. Sec 2751 et seq.) or the Export Administration Act of 1979, as amended , Title 50, U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Dissemination in accordance with provisions of D.O.D. Directive 5230.25.

(b) NOTICE REGARDING FILL-INS:

Please note that this solicitation contains several clauses and provisions that require you to complete a fill-in or representation. If you don't complete these fill-ins, your offer may be determined ineligible for award. So please be careful to read and complete each such clause and provision.

NOTICE REGARDING CAGE CODE:

DFARS provision 252.204-7001 requires you to include your Commercial and Government Entity (CAGE) code in Block 15A on page one (1) of this solicitation, along with your name and address. If it will not fit in the space provided in block 15A please insert it here: \_\_\_\_\_.

(c) Other Key Features or Requirements of This Solicitation:

(1) Required Copies in Response to This Solicitation:

To be considered for award, you must return one signed original of your offer, completed and properly executed, by the time and date shown in Block 9 of the Standard Form 33 (SF33).

(2) Notice Regarding Handcarried Offers:

In addition, please be sure to follow the instructions in the provision entitled HANDCARRIED OFFERS - INCLUDING OFFERS DELIVERED BY EXPRESS DELIVERY SERVICES (NON-U.S. POSTAL SERVICE MAIL) in Section L. Offers MUST identify this solicitation number on the face of the mailing or delivery wrapper, and MUST be addressed to Bid Opening (AMSTA-AQ-DSAB), NOT to the buyer.

(3) Notice of 9-Digit ZIP Code:

Please note that the TACOM Bid Opening Office has been assigned a special 9-digit ZIP code of 48397-0001. This 9-digit ZIP code applies only for correspondence and bids/offers addressed to Bid Opening (Block 8 of SF33). Correspondence addressed to any other office at TACOM should cite TACOM's regular 9-digit ZIP code of 48397-5000.

<b>CONTINUATION SHEET</b>	<b>Reference No. of Document Being Continued</b>  <b>PIIN/SIIN</b> DAAE07-00-R-N061 <b>MOD/AMD</b>	<b>Page 4 of 99</b> REPRINT
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**Name of Offeror or Contractor:**

(4) Required Notification to Subcontractors:

If awarded the contract, you should advise all potential suppliers and subcontractors of the DO/DX Rating assigned to orders resulting from your subcontracts. The Rating can be found next to Block 1 on the first line of the SF33.

(5) Acknowledgment of Amendments:

Please acknowledge any amendments to this solicitation in the space provided in Block 14 of the SF33. Include the number and date of each amendment. Acknowledgment of all amendments received is important because failure to do so may make your offer ineligible for award.

(6) Question/Problem Resolution:

Questions regarding this solicitation should be directed to the buyer identified in Block 10 of the SF33.

(d) Inconsistencies Between the Executive Summary and the Solicitation:

This executive summary has been prepared as an aid to you, the potential offeror. We have made every attempt to accurately reflect the requirements and information contained in the balance of this solicitation. However, if you find any inconsistency between this executive summary and the solicitation, please contact the buyer identified in Block 10 of the SF33.

(End)

A-2                      52.204-4006                      TACOM'S ACQUISITION CENTER HOME PAGE ON THE WORLD-WIDE WEB                      APR/1999  
(TACOM)

(a) We have replaced the TACOM Electronic Bulletin Board (EBB) with a World-Wide Web Home Page. Most of the information you formerly could find on the EBB now appears on our home page, and we've added items that were not available on-line before now. You'll find that the Acquisition Center Home Page is much easier to use than the EBB. The home page, which is accessible using any commercial web-browser, appears at this <http://www.tacom.army.mil/acqcen/>

(b) You may need to use special software to view documents that we post on the home page. This viewing software is freeware, available for download at no cost from commercial Web Sites like Microsoft and Adobe. In cases where such software is required, we provide a link from our page to the commercial site where the software is available. Once you arrive at the software-developer's site, follow their instructions to download the free viewer. You then can return to the TACOM home page.

(c) The following solicitation information and open actions are available on our home page:

- Competitive Solicitations for Spare and Repair Parts
- Sole Source/Restricted Buys (Subcontracting Opportunities)
- Base Operations Procurement Information
- Information Technology and Services Acquisitions, and
- Commercial Vehicle Solicitations.

In addition, you'll also find:

- current TACOM Master Solicitations, to include a master solicitation for simplified acquisitions,
- Draft Solicitations
- Market Surveys/Sources Sought Notices
- Broad Agency Announcements
- TACOM Acquisition Center Points of Contact
- Proposal Submission Guidelines
- Searchable Database for Procurement History
- Central Contractor Registration (CCR) Information
- Environmental Information
- Acquisition Reform information
- Link to CBDNet, and
- a Listing of Procurement References and Other Government Links.

(d) All solicitations are now available on the TACOM web page and are no longer available in hard copy. The TDPs, and other documents, when available electronically, will be an attachment to the solicitation package on the web. Documents not available on the web will be identified in the solicitation package and shall be available from the TACOM Bid Lobby. Instructions for requesting this information shall be available on the Acquisition Center home page. Please see [Proposal Submission Guidelines](#) on the home page for more information.

(e) If you have questions or need help in using the Acquisition Center Home Page, call our Electronic Contracting Help Desk at (810) 574-7059, or send an E-Mail message to:  
[acqcenweb@tacom.army.mil](mailto:acqcenweb@tacom.army.mil)

CONTINUATION SHEET	Reference No. of Document Being Continued PIIN/SIIN DAAE07-00-R-N061 MOD/AMD	Page 5 of 99 REPRINT
Name of Offeror or Contractor:		

If you have questions about the content of any specific item posted on our home page, please call the buyer or point of contact listed for the item.

\*\*\*end\*\*\*

A-3                    52.204-4007                    EXECUTIVE SUMMARY--REQUIRED USE OF ELECTRONIC COMMERCE                    JUL/1999  
(TACOM)

This solicitation contains a Section H and a Section L provision concerning TACOM's use of Electronic Commerce, which includes Electronic Data Interchange (EDI) and the Worldwide Web (WWW), in issuing awards, contract modifications and delivery orders. The selected offeror is required to register with DoD Central Contractor Registration (CCR) and will receive an electronic Notice of Award/Modification via e-mail. All awards, modifications, and delivery orders are posted on the TACOM Business Opportunities Webpages. The contractor will have the option of downloading the award from the WWW or receiving it through EDI.

A-4                    52.215-4854                    PAPERLESS ELECTRONIC RESPONSES REQUIRED IN RESPONSE TO THIS                    APR/1999  
SOLICITATION/REQUEST

YOU ARE REQUIRED TO SUBMIT YOUR OFFER, BID, OR QUOTE VIA PAPERLESS ELECTRONIC MEDIA. SEE THE PROVISION ENTITLED "ELECTRONIC OFFERS (OR 'QUOTES' OR 'BIDS') REQUIRED IN RESPONSE TO THIS SOLICITATION (OR 'REQUEST FOR QUOTATIONS')" FOR MORE SPECIFIC INFORMATION.

[End of provision]

A-5                    52.247-4020                    NOTICE -- FAR FOB ORIGIN CLAUSE                    FEB/1998  
(TACOM)

- (a). Please carefully review the FAR FOB Origin clause (52.247-29) in this solicitation.
- (b) Paragraph (c) of that clause requires you to perform all the tasks required under the clause at the plant(s) where the supplies will be finally inspected and accepted.
- (c) If facilities for shipment by carrier's equipment aren't available at your plant(s), the clause (with some restrictions) allows you to perform the required tasks FOB at the closest location where you can ship by the carrier's equipment.
- (d) If you don't comply with the requirements of paragraph (c) of the FAR FOB Origin clause, then:
  - (1) your bid under a sealed bid acquisition will be non-responsive; or:
  - (2) your offer under a negotiated acquisition may be rejected.

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Executive Summary

General:

This solicitation requests proposals for the development phase of the Abrams ? Crusader Common Engine (ACCE) Program. The Army is seeking a new Abrams Tank propulsion system and a Crusader Artillery System power pack that employ, at a minimum, a common engine. Although commonality in manufacturing offers desirable economies, the primary goal of commonality is to reduce maintenance and support burdens of our Soldiers in the field.

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**Name of Offeror or Contractor:**

transmission development to the offeror selected in response to this RFP.

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- c. Includes an engine that optimizes commonality between the Abrams and Crusader systems. The optimum common solution will maximize the operational and logistics benefit to the war-fighter. Such benefits include fewer and interchangeable Authorized Stock List (ASL) items, common training, common Test and Measurement Devices, etc.
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The Government intends to only award Phase I of the program under this action. Offerors should read Attachment 1; ?Acquisition Process?, for a more detailed account of the Army's acquisition strategy for award of Phase I before continuing into this solicitation package.

\*\*\* END OF NARRATIVE A001 \*\*\*

**Name of Offeror or Contractor:**

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
	SECTION B - SUPPLIES OR SERVICES AND PRICES/COSTS				
0001	<u>Supplies or Services and Prices/Costs</u>				
0001AA	<u>SERVICES LINE ITEM</u>			\$ _____	\$ _____
	NOUN: COMMON ENGINE DESIGN & DEVELO SECURITY CLASS: Unclassified  <u>Inspection and Acceptance</u> INSPECTION: Origin      ACCEPTANCE: Origin  <u>Deliveries or Performance</u> DLVR SCH                      PERF COMPL <u>REL CD</u> <u>QUANTITY</u> <u>DATE</u> 001                      0                      30-JUN-2003				
0002	<u>Supplies or Services and Prices/Costs</u>				
0002AA	<u>PROTOTYPE ITEM</u>	13	EA	\$ _____	\$ _____
	NOUN: ABRAMS UNIQUE PROTOTYPE SECURITY CLASS: Unclassified  <u>Packaging and Marking</u> PACKAGING/PACKING/SPECIFICATIONS: STANDARD COMMERCIAL PRACTICE LEVEL PRESERVATION: Commercial LEVEL PACKING: Commercial  <u>Inspection and Acceptance</u> INSPECTION: Origin      ACCEPTANCE: Origin  <u>Deliveries or Performance</u> DOC                      SUPPL <u>REL CD</u> <u>MILSTRIP</u> <u>ADDR</u> <u>SIG CD</u> <u>MARK FOR</u> <u>TP CD</u> 001 <u>DEL REL CD</u> <u>QUANTITY</u> <u>DEL DATE</u> 001                      1                      28-FEB-2002  002                      1                      28-MAR-2002  003                      2                      28-APR-2002  004                      2                      28-MAY-2002  005                      2                      28-JUN-2002  006                      2                      28-JUL-2002  007                      3                      28-AUG-2002  FOB POINT: Origin  SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000)      SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR				

Name of Offeror or Contractor:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT																																		
	<p>TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p> <p>The above is the desired delivery schedule. See also Section C.2, Section L and Attachment 2 of this document.</p> <p>(End of narrative F001)</p>																																						
0003	<u>Supplies or Services and Prices/Costs</u>																																						
0003AA	<p><u>PROTOTYPE ITEM</u></p> <p>NOUN: CRUSADER UNIQUE PROTOTYPE SECURITY CLASS: Unclassified</p> <p><u>Packaging and Marking</u> PACKAGING/PACKING/SPECIFICATIONS: STANDARD COMMERCIAL PRACTICE LEVEL PRESERVATION: Commercial LEVEL PACKING: Commercial</p> <p><u>Inspection and Acceptance</u> INSPECTION: Origin      ACCEPTANCE: Origin</p> <p><u>Deliveries or Performance</u></p> <table><tr><td>DOC</td><td>SUPPL</td></tr><tr><td><u>REL CD</u></td><td><u>MILSTRIP</u></td></tr><tr><td><u>ADDR</u></td><td><u>SIG CD</u></td></tr><tr><td><u>MARK FOR</u></td><td><u>TP CD</u></td></tr><tr><td>001</td><td></td></tr><tr><td><u>DEL REL CD</u></td><td><u>QUANTITY</u></td></tr><tr><td>001</td><td>2</td></tr><tr><td></td><td><u>DEL DATE</u></td></tr><tr><td></td><td>28-FEB-2002</td></tr><tr><td>002</td><td>2</td></tr><tr><td></td><td>28-AUG-2002</td></tr><tr><td>003</td><td>3</td></tr><tr><td></td><td>28-SEP-2002</td></tr><tr><td>004</td><td>3</td></tr><tr><td></td><td>28-OCT-2002</td></tr><tr><td>005</td><td>1</td></tr><tr><td></td><td>28-NOV-2002</td></tr></table> <p>FOB POINT: Origin</p> <p>SHIP TO: <u>PARCEL POST ADDRESS</u> (Y00000) SHIPPING INSTRUCTIONS FOR CONSIGNEE (SHIP-TO) WILL BE FURNISHED PRIOR TO THE SCHEDULED DELIVERY DATE FOR ITEMS REQUIRED UNDER THIS REQUISITION.</p> <p>The above is the desired delivery schedule. See also Section C.2, Section L and Attachment 2 of this document.</p>	DOC	SUPPL	<u>REL CD</u>	<u>MILSTRIP</u>	<u>ADDR</u>	<u>SIG CD</u>	<u>MARK FOR</u>	<u>TP CD</u>	001		<u>DEL REL CD</u>	<u>QUANTITY</u>	001	2		<u>DEL DATE</u>		28-FEB-2002	002	2		28-AUG-2002	003	3		28-SEP-2002	004	3		28-OCT-2002	005	1		28-NOV-2002	11	EA	\$ _____	\$ _____
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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
C-1	TACOM	SUPPLEMENTAL STATEMENT OF WORK: TAILORING OF MIL-L-61002 TO ELIMINATE USE OF CIODS	JUL/1995

The following change applies to MIL-L-61002, Amendment 1, dated 10 Jan 92, which is part of the technical data package (TDP) or specification for this contract. Paragraph 4.6.3.2 requires immersion testing in methyl chloroform, a Class I Ozone-Depleting Substance, or CIODS. Therefore, in order to eliminate the use of CIODS, MIL-L-61002 is changed as follows:

When meeting the requirements of MIL-L-61002, Amendment 1, delete the immersion testing requirements of paragraph 4.6.3.2.  
(End of clause)

C-2	TACOM	SUPPLEMENTAL STATEMENT OF WORK: TAILORING OF MIL-STD-129 TO ELIMINATE USE OF CIODS	JUL/1995
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The following change applies to MIL-STD-129M, dated 15 Jun 93, which is part of the technical data package (TDP) or specification for this contract. The following references to Class I Ozone-Depleting Substances, or CIODS, are part of MIL-STD-129M:

- a. Paragraphs 3.27 and 3.28 reference MIL-P-116;
- b. Paragraphs 5.1.1.2 and 5.1.1.3 reference MIL-C-46168 and MIL-C-53039;
- c. Numerous paragraphs require labels per MIL-L-61002.

Therefore, in order to eliminate the use of CIODS, MIL-STD-129M is changed as follows:

- a. For paragraphs 3.27 and 3.28, comply with MIL-P-116J, Amendment 2, dated 18 Aug 93.
  - b. For paragraphs 5.1.1.2 and 5.1.1.3, comply with both MIL-C-46168D, Amendment 3, dated 21 May 93 and MIL-C-53039A, Amendment 2, dated 19 May 93.
  - c. For paragraph 4.6.3.2 of MIL-L-61002, Amendment 1, dated 10 Jan 92, delete the immersion testing requirements for all references to MIL-L-61002.
- (END OF CLAUSE)

C-3	52.239-4001 (TACOM)	YEAR 2000 (Y2K) COMPLIANCE	MAY/1999
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(a) In the event that this contract calls for the delivery of any data processing hardware, software and/or firmware (to be referred to as information technology), such deliverables shall be required to perform accurate date/time processing involving dates subsequent to December 31, 1999. The information technology shall be Year 2000 compliant upon delivery.

(b) Definition. Year 2000 compliant means information technology that accurately processes date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations. Furthermore, Year 2000 compliant information technology, when used in combination with other information technology, shall accurately process date/time data if the other information technology properly exchanges date/time data with it.

- (c) If this contract contains another provision requiring Y2K compliance, that provision shall take precedence.
- (End of clause)

STATEMENT OF OBJECTIVES:

C.1 General:

C.1.1 This Statement of Objectives (SOO) provides the Army's overall objectives/requirements to achieve the total Phase I program requirements, and the level and type of support the Army expects will be required to accomplish those objectives. Offerors shall use the SOO, together with other applicable portions of the solicitation as a guideline for preparing their offers. The offer shall be for a total propulsion system solution for Abrams and an integrated power pack solution for Crusader which meets the following Phase I Program Objectives/Requirements:

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1. Reducing Total Ownership Cost for the Abrams. The goal is to realize a significant net savings over the current Abrams Tank equipped with the existing AGT 1500 engine based on a two-level maintenance concept and a depot maintenance partnership with Anniston Army Depot as outlined in Enclosures A and F to Attachment 6.
  2. Capable of being integrated into the Crusader power pack space claim, as specified in Enclosure F.1 and F.2 of Attachment 5, while achieving the overall Crusader system weight reduction goals as defined in Enclosure F, para. 3.2.2.2.1, of Attachment 5.
  3. Satisfying Abrams and Crusader performance requirements specified in Enclosures E and F of Attachment 5. In the case of similar vehicle performance requirements, the more stringent system requirement shall govern.
  4. Capable of being integrated into the Abrams while minimizing changes to the basic platform or other subsystems. In order to realize the Abrams tank total ownership cost savings as quickly as possible, the ease and cost of field application for Abrams will be critical.
  5. Capable of being economically developed and produced to meet the Abrams and Crusader program development and production schedules specified in Attachment 2.
- C.1.2 Although the Government will evaluate the total propulsion system solution for Abrams and the integrated power pack for Crusader, including the integration cost and integration technical impacts, offerors shall provide a contract SOW defining the performance requirements related to the common engine development (Category-1 Work) and the applicable portions of the Integration Work (Category-2) as explained in Enclosure A to Attachment 1, of the overall Phase I program. The offeror's proposed SOW along with each system-integrating contract (to be negotiated separate from this action) will comprise the total Phase I contract work effort. The methodology for the division of work between the development and integration contracts is explained in Enclosure A to Attachment 1.
- C.1.3 The "Abrams Propulsion System" is defined as: engine (prime power source); transmission, including steering and braking; air cleaner; final drives; cooling system, including radiators, fans, pumps, plumbing and ducting for engine, hydraulics, electrical, transmission and fuel cooling; exhaust and air inlet/outlet ducting; controls; mechanical, electrical, hydraulic and pneumatic quick disconnects for power pack removal; diagnostic/prognostic/maintainability components; design features and software; infrared, noise and smoke signature suppression; vehicle hydraulic, electrical and pneumatic (if any) power generation equipment and conditioning as required for propulsion; batteries; fuel cells (tanks) and fuel fill and delivery systems; nuclear, biological and chemical (NBC) interfaces; fire suppression volume, auxiliary power unit if required; propulsion system mounting; other propulsion system ancillary equipment.
- C.1.4 The "Crusader Integrated Power Pack" is defined as engine and transmission; hull connection points/mounting provisions; power pack cooling including heat exchangers (sized), cooling lines, fans/fan motor controllers (and fan power requirements), oil and coolant tanks, and plumbing/ducting/plenums; air induction and filtration; exhaust ducting; fuel lines; drive-by-wire actuators/controllers; starter; wiring harnesses; power take-offs (PTOs); 28V and 270V generators; mechanical, electronic and cooling disconnects (for power pack roll-out and removal); and power pack lift provisions. The "Crusader Power Pack" is defined as the integrated engine and transmission assembly.
- C.1.5 "Common Engine" refers to the basic engine major assemblies and is referred to as the "B-Kit". This does not necessarily mean identical external configurations between the Abrams and Crusader. There may be variations of attaching or interfacing components to accommodate specialized configuration and operational requirements of the Abrams and Crusader. Those unique interfaces necessary to interface the common engine to the Abrams are referred to as the "Abrams A-Kit". Those unique interfaces necessary to interface the common engine to the Crusader are referred to as the "Crusader A-Kit". The Common Engine objective is to maximize the operational and logistics benefit to the war-fighter, by employing an optimum level of an identical design to reduce the unit Authorized Stock List (ASL) items while allowing ease of removal/installation, maintenance, and sustainment at the lowest projected cost of ownership.
- C.1.6 The SOW should be structured according to a Contract Work Breakdown Structure (CWBS), traceable to a Program Work Breakdown Structure (PWBS) and to the SOO. The Government will negotiate the SOW during the source selection process, and include a mutually agreeable SOW in the model contract at the time of award. The following is a general breakdown of how the work is to be priced under each Contract Line Item Number (CLIN):
- C.1.7 CLIN 0001AA - Design and Development of the Common Engine
- C.1.7.1 The offeror's Abrams propulsion system solution and Crusader integrated power pack solution must share a common engine to be developed under this contract.
- C.1.7.2 The offeror shall include all common Systems Engineering (C.4) related to the design of the common portion of the engine in this CLIN. The offeror's proposal shall include a clear description of the common engine in the form of development specifications and Interface Control Documents (ICDs) that define the interface requirements between the common portion of the engine and the engine specific interfacing hardware required to make the common engine compatible with each vehicle system

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(B-Kit). The common engine development specifications and the B-Kit ICDs for each vehicle will be made part of the contract at the time of award, and will require Government approval to change. The validated production performance specification and ICD shall be delivered 30 days after the completion of Government testing.

C.1.7.3 The offeror shall also include all common program management (C.3), common contractor testing and common contractor test support (C.5) in this CLIN.

C.1.8 CLIN 0002AA - Abrams Unique Engine Design, Development and Prototype Delivery:

C.1.8.1 Under this CLIN the offeror shall provide the engine-specific systems engineering and design work required to make the common engine described in CLIN 0001AA compatible with the Abrams Tank. Such efforts shall include the design and development of all unique engine specific interfacing hardware/software and the fabrication of and delivery of thirteen (13) Abrams prototype engines for test and evaluation purposes. In addition, the offeror shall include the cost of all Abrams unique program management activities and Abrams unique testing and test support.

C.1.8.2 The offeror's proposal shall include development specifications or characteristics (based on the engine performance data sheets required by L.3.1.1) that describe the proposed performance of the Abrams engine. In addition, the offeror shall develop ICDs (based on the preliminary ICD required by L.3.4.2) which describe all interface requirements between the Abrams engine and any interfacing systems on the Abrams, vehicle system (Abrams A-kit). The preliminary Abrams A-kit ICDs shall be coordinated with GDLS, finalized, and delivered within 90 days after contract award. The Government will include the engine development specifications and the Abrams A-kit ICDs in the contract. Changes to those specifications and Abrams A-kit ICDs throughout the development process shall be managed in accordance with C.4.2 below, culminating in a validated final production performance specification and A-kit ICD for the Abrams Engine.

C.1.9 CLIN 0003AA - Crusader Unique Engine Design, Development and Prototype Delivery: Under this CLIN the contractor shall provide the engine-specific systems engineering and design work required to make the common engine described in CLIN 0001AA compatible with the Crusader Artillery System. Such efforts shall include the design and development of all unique engine specific interfacing hardware/software and the fabrication of and delivery of eleven (11) Crusader prototype engines for test and evaluation purposes. In addition, the offeror shall include the cost of all Crusader unique program management activities and Crusader unique testing and test support. The Crusader A-Kit ICDs will be defined under the Crusader System Integration Contract with UDLP as the Crusader System matures.

C.1.10 CLIN 0004AA - Option for Category 2 Integration Work (Abrams Only): The award of any Category-2 work (See Attachment 1 for a description of Category-2 work) under this contract will be at the Government's option. To be eligible to receive the Abrams "Category-2" work, the offeror must separately price the Abrams "Category-2" work in the proposed SOW, structured according to a detailed CWBS and traceable to the PWBS and the appropriate portions of the SOO. In addition, the offeror shall provide development specifications and Interface Control Documents that clearly reflect all additional hardware to be developed under the contract. If an offeror's common propulsion system solution requires a new Abrams transmission or modification to the existing Abrams transmission, a Category-2 option for the transmission is required.

C.1.11 The SOW for this effort will consist of four primary functions:

1. Program Management (C.3), including Data Management, Program Control and Scheduling and Earned Value Management.
2. System Engineering (C.4), including Specialty Engineering, Interface Management and Specification Development
3. Test and Evaluation (C.5), including Contractor Testing, and Government Test Support
4. Logistics (C.7), including Maintenance Planning, Supply Support, Technical Manuals, and Training/Training Devices

C.1.12 The proposed SOW shall be structured in the same general format as the SOO and must include all of the functions listed in the paragraphs below. When applicable, the SOO language shall be included in the proposed SOW. The SOO language may be tailored to conform to any unique aspects of the proposed approach and CWBS. In any event, the proposed SOW must result in the completion of validated production specifications and ICDs that reflect a final design that meets the program objectives stated in C.1.1 above.

C.2 Phase I Schedule: The Army's schedule for Phase I development is at Attachment 2. Offerors may propose alternate Abrams and Crusader development schedules, prototype delivery schedules and a joint contractor/Army test schedules/concepts that: (1) support the proposed development effort, (2) support the Crusader Milestone II Program Decision and (3) provide for a low risk transition from Phase I to Phase II.

C.3 Program Management:

C.3.1 General:

C.3.1.1 The offeror shall provide for a management organization that will exercise the requisite planning, direction and control over the program to accomplish development objectives within cost and schedule constraints. The Army envisions an organizational structure that horizontally integrates the product's design, development, integration, logistics, manufacturing, etc. using a

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streamlined Integrated Product & Process Development (IPPD) and Systems Engineering (SE) environment. In addition, the offeror is required to interface with each system integrating contractor at all levels of the program.

C.3.1.2 The Army intends to establish a co-located Integrated Product Team (IPT) to facilitate successful completion of the program. The team will consist of Army representatives, Abrams and Crusader system integrators and the engine developer. The IPT's primary responsibility will be the timely identification and resolution of program and technical issues across all program functional areas. The key to this IPT's success is the Army, developer, integrators and suppliers acting as partners to carry out the program objectives. The offeror shall provide IPT training to facilitate the teaming arrangements and relationships.

C.3.1.3 Reviews: The offeror shall support and conduct the necessary meetings and reviews required to effectively manage the development efforts in an IPT environment with the Government and with the respective system integrators. In addition, the offeror shall support working level Technical Interchange Meetings (TIMs), monthly Program Management Reviews (PMRs), quarterly In-Process Reviews (IPRs) and annual System Level Reviews (SLRs) conducted by the Crusader and Abrams prime contractors. These meetings and reviews are conducted to manage and status all facets of the program on a recurring basis.

C.3.1.4 The Program Management functions include: Data and Information Management; Development and Maintenance of the Integrated Master Plan and Integrated Master Schedule; and Cost and Earned Value Reporting as specified below.

C.3.2 Data and Information Management:

C.3.2.1 The offeror shall electronically maintain all data created for this Phase I contract and make it available for unlimited Army access and use. The offeror shall also establish procedures for documentation development, control and delivery. All data must be electronically transferred. The offeror shall comply with the information management standards prescribed below and in the Integrated Data/Common Environment (IDE/CDE) Overview provided in Enclosure A to Attachment 7.

C.3.2.2 Information Management:

C.3.2.2.1 The offeror shall make the fullest practicable use of the provided IDE/CDE to develop, manage and disseminate program management and technical information. The IDE/CDE describes the standards and tool set for data management applied across the program. All data (excluding classified data) shall be accessible via the IDE.

C.3.2.2.2 The information management tools provided by IDE/CDE are: IDE; RTM (Requirements Traceability Manager); RDD-100; ProENGINEER; Rational software development tools including Apex, Rose/Ada, Ada Analyzer, Testmate, Cross-compiler to Lynx OS); MatrixX; and Open Plan. These tools are used to facilitate program-wide integration activities. The offeror is required to have a T1 line with the domestic version of Netscape to acquire access to these information management (IM) tools

C.3.2.2.3 The following resources are not provided and are the full responsibility of the offeror: printers, plotters, UNIX workstations, PC desktops, NT desktops, offeror LAN, offeror office automation equipment, phones, video teleconferencing services, fax machines and support services associated with this equipment.

C.3.2.2.4 UDLP will provide IDE/CDE technical support services at the offeror's facilities to ensure the systems are properly installed, implemented, administered, and maintained on server hardware and server operating system software. UDLP will provide IDE/CDE application support, training and mentoring on the tools to users at the offeror facilities. The offeror shall provide notification when tools are not fully used; CDE tools not fully used can be applied to other areas of the program. The offeror shall identify IDE or CDE servers used for Crusader/Abrams that are Government owned. For Government-owned servers, the offeror shall provide memory and/or disk drive upgrades necessary to support Crusader through EMD. UDLP will provide installation services and maintenance for these upgrades.

C.3.2.2.5 Initial IDE training and training for the IDE/ProENGINEER(tm) interface will be provided to the offeror and to its second tier sub-contractors (if required) at the contractor's site.

C.3.3 Integrated Master Plan (IMP):

C.3.3.1 The offeror shall develop a comprehensive IMP which describes the management processes and key events required to complete the systems design, engineering and integration efforts to be performed in accordance with the proposed SOW. The objective of the IMP is to provide a framework for implementing and measuring performance required at the completion of those key events. The IMP should focus on the significant accomplishments and accomplishment criteria necessary to complete the development, integration, fabrication and test of the prototype engine or power packs. Each task shall be accompanied by specific accomplishment criteria that shall be used to assess the completion of the task for a given event.

C.3.3.2 A preliminary IMP shall be submitted with the offeror's proposal and included in the contract. The preliminary IMP narrative must address the following management processes:

C.3.3.2.1 Interface Management: The IMP shall describe the technical and management processes for interfacing with the Army and the System Integration Contractors, and for ensuring that the common engine configuration is maintained. Given the evolving

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nature of the Crusader system design and the Abrams vehicle integration requirements, the IMP should clearly reflect the offeror's approach for managing requirements and interfaces across programs and contracts. The IMP shall describe plans/processes for maintaining requirements and interface control, and for managing changes to these requirements and interfaces. The IMP shall also describe plans/processes for achieving issue resolution across programs/contracts. The achievement and maximization of commonality will be considered in the Award Fee Determination.

**C.3.3.2.2 Performance Metrics:** The IMP shall define key technical performance measures (TPMs) and supporting technical performance parameters (TPPs) to be tracked during development. Included with the TPMs and TPPs shall be the offeror's proposed "Success Criteria" for products to be delivered during Phase I and proposed "Transition Criteria" for transitioning from Phase I to Phase II. The "Success Criteria" will define the level of performance expected from the delivered products in order to declare full accomplishment of the technical effort during Phase I. The "Transition Criteria" will define the programmatic goals (i.e., technical, cost, weight and risk) required for a Low risk transition to Phase II in support of the Crusader EMD and Abrams fielding schedules.

**C.3.3.2.3 Risk Management/Metrics:** The IMP shall identify the program technical, cost and schedule risks for hardware and software, their risk ranking and the risk mitigation plans proposed to reduce these risks early in the program. The offeror shall describe the risk assessment technique/methodology(ies) used to determine these risk ratings. The risk mitigation plans shall include specific risk reduction metrics (RRM) for measuring the progress/status of risk reduction initiatives. The Army's objective is to reduce all technical risks to Low by the conclusion of Phase I.

**C.3.3.2.4 Cost Management/Metrics:** The IMP shall describe processes to be used for managing life cycle cost (LCC) in order to minimize the Army's total ownership cost (TOC). The use of Cost as an Independent Variable (CAIV), Design to Unit Roll-Away Cost Objectives (DTURC), and Operations and Support (O&S) cost objectives should be included with projected glide paths and planned activities for achieving those glide paths. The achievement of Life Cycle Cost objectives will be considered in the Award Fee determination.

**C.3.3.2.5 Weight Management/Metrics:** The IMP shall describe the proposed approach for managing weight. The offeror shall establish a power pack design-to-weight (DTW) objective and manage to this objective throughout development. The offeror shall include its DTW target with the projected glide path and planned activities for achieving this glide path and DTW target. The DTW will be considered in the Award Fee determination.

**C.3.3.2.6 Reliability/Maintainability/Durability Management/Metrics (R/M/D):** The IMP shall describe the proposed approach for managing R/M/D. The offeror shall establish R/M/D objectives and manage to those objectives throughout development. The offeror shall include its R/M/D target, including growth curves, with the projected glide path and planned activities for achieving this glide path and R/M/D target.

**C.3.3.2.7 Production Transition:** The offeror shall provide a plan to transition engine development to a producible and cost effective production engine at a rate of at least 40 each per month. At a minimum, functional areas to be addressed and included in this plan are the following: Subcontractor/vendor controls, critical materials and production lead-times, make/buy trade studies, configuration management and control, inventory control, shop floor controls, production/manufacturing plans, site plans, process and plant layouts, equipment, tooling, special test equipment and test capabilities, plant capacity, labor relations, workforce skills, workforce training and certifications, facility modernization, and computer aided manufacturing. Also included in this plan should be the functional requirements to establish a Depot overhaul/repair capability in conjunction with the Anniston Army Depot.

**C.3.3.2.8 Reserved**

**C.3.4 Integrated Master Schedule (IMS):**

**C.3.4.1** The offeror shall develop an IMS to define the time-phasing of key program tasks, events, milestones and their interdependencies. The IMS will be used to assess program status and conduct schedule planning (e.g., critical path) and risk assessments. The IMS shall identify the long lead items (LLI) that drive development and procurement time lines. A preliminary IMS shall be submitted with the offeror's proposal. The preliminary IMS shall contain all major milestones leading to production deliveries, including long lead material orders and production facilitization. During program execution, the IMS will be updated on a regular (minimum of monthly) basis to accurately reflect the established development plan and status. The prescribed computer software tool for maintaining the IMS is OpenPlan. The propulsion system/power pack IMS will be integrated into the vehicle system integration contractors' IMS by the system integration contractors to manage the total development program.

**C.3.4.2** During program execution, the offeror shall maintain a list of LLI, where LLI are defined as those parts and components with procurement times greater than 120 days. The list shall include information on estimated cost and lead-time for each item.

**C.3.5 Cost and Earned Value Reporting.**

**C.3.5.1 Earned Value Management System (EVMS):** The offeror shall implement and maintain an Earned Value Management System for the purpose of generating a monthly Cost Performance Report (CPR) and a Contract Funds Status Report (CFSR). The Earned Value

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Management System shall conform to the criteria set forth in the EVMS ANSI standard (ANSI/EIA-748-1998) for Defense Acquisition. It shall be broken out to the third indenture level, and all raw data shall be calculated out to the final product. All cost and earned value management reports shall be distributed via IDE.

C.3.5.2 Work Breakdown Structure (WBS): The offeror shall generate a Work Breakdown Structure, using MIL-HDBK-881 as a guide. Also, the offeror shall develop a WBS Dictionary that describes each and every WBS element. The WBS shall represent the total contract effort. The offeror shall define within the WBS all subcontracted effort. Contract Change Proposals and Supplemental Agreements shall require the same level of WBS identification, definitions, and SOW relationships as the basic contract. The offeror shall use the WBS for planning, managing and reporting program status and projections for cost, schedule, and technical achievements. No changes can be made at or above the third level of the WBS without Government approval.

C.3.5.3 Contract Cost Data Reporting (CCDR): The offeror shall electronically produce contract cost data in accordance with the Contractor Cost Data Reporting Manual.

C.3.5.4 Performance Measurement Baseline(PMB): The offeror shall provide a detailed PMB within 60 days of contract award. During program execution, the offeror will provide updates per the Program EVMS description. Within 120 days after contract award, the offeror will support an Integrated Baseline Review (IBR) at its facility. The offeror shall generate a time-phased budget baseline assigning all contract costs to specific WBS elements. The PMB shall be the basis for the Cost Performance Report (CPR). No budgetary changes shall be made to the PMB within the WBSs without prior Government notification. The Government reserves the right to disapprove such changes.

C.3.5.5 Cost Performance Report (CPR): The offeror shall prepare and submit a CPR using DI-MGMT-81466 as a guide. CPR reporting shall be through the third level of the WBS. Reporting shall be required at lower levels when the Government deems particular items to be problem or high risk areas.

C.3.5.6 Contract Funds Status Report (CFSR): The Contractor shall prepare and submit a Contract Funds Status Report (CFSR) using DI-MGMT-81467 as a guide.

C.3.5.7 Integrated Baseline Review (IBR) and CPR Plant Visits: The contracting Officer and/or a team of designated representative will visit the offeror's facility, within 180 days after contract award, to review the Contractor's Earned Value Management System in operation and to determine the ability of that system to provide timely and accurate CPR data. This review will include a technical review of the PMB. Further reviews will be on an as needed basis.

**C.4 Systems Engineering:**

**C.4.1 General:** The offeror shall perform systems engineering and analysis to define the system physical and functional characteristics using a contractor-preferred and described Systems Engineering Approach. The application of models and simulations is encouraged to streamline development and increase the Army's confidence in the ability of the offeror's solution to meet its objective requirements. The results of all systems engineering analyses and trade studies shall be documented and shared with the Army. The depth of each trade study shall be commensurate with cost, schedule, reliability, performance and risk impacts to the program. The offeror's proposed System Engineering Approach shall be included in the proposal. The proposed Systems Engineering SOW shall address all applicable facets of systems/specialty engineering. The following shall be specifically addressed in the Systems Engineering SOW:

C.4.1.1 Requirements Management: Requirements shall be placed and managed in the program Requirements Traceability Management (RTM) database. The offeror shall update the Requirements Compliance Matrix (RCM) on a regular basis to reflect the expected capability of the current design.

C.4.1.2 MANPRINT: The offeror shall incorporate MANPRINT into the design effort. The offeror shall deliver all documentation, reports and technical data required for inclusion into preliminary and final MANPRINT documents, e.g., Human Engineering Design Approach Document-Operator (HEDAD-O), Human Engineering Design Approach Document-Maintainer (HEDAD-M), Preliminary Hazard Analysis (PHA), Safety Assessment Report (SAR), etc.

C.4.1.3 Human Factors Engineering (HFE): The offeror shall perform design support, tests and evaluations using MIL-HDBK-46855 as guidance to ensure that applicable human engineering requirements are incorporated into the design. The offeror shall use the human engineering design criteria of MIL-STD-1472 and MIL-HDBK-759 as guidance.

C.4.1.4 Safety/Health Hazard Engineering: The offeror shall perform safety engineering for hardware and software to ensure that safety and health hazard requirements are met. The UDLP Integrated System Safety Program Plan (ISSPP) will be used as a guideline for both Crusader and Abrams. The safety program shall be in accordance with applicable sections of the ISSPP.

**C.4.1.5 Environmental Engineering:**

**C.4.1.5.1** The offeror shall have an active environmental program that accomplishes the following: (1) ensures the offeror is in full compliance with all applicable federal, state and local environmental laws and regulations in effect; and (2) ensures no

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Class 1 Ozone Depleting Chemicals (ODC) or Cadmium plated parts are used in the performance of this contract. The offeror shall use the Environmental Design Guidelines (44114 E-6383) (Enclosure B to Attachment 8) for both Crusader and Abrams to identify, evaluate, and select materials and/or processes from the preferred materials and processes lists. If a material and/or process is selected from the restricted list, it shall require justification as being mission and/or cost critical. In addition, the offeror shall provide a list of materials and/or processes used in the manufacture or support of their product. The offeror shall also support the Abrams and Crusader life cycle management program by providing additional information on the use of materials and/or processes upon request.

C.4.1.5.2 Hazardous material management and pollution prevention plans will be used to minimize life cycle environmental impacts and to ensure minimum industrial pollution and hazardous wastes are generated in the engine design, development, production, test, operation, maintenance, demilitarization and disposal activities. The offeror shall support and provide information on the amount and disposition of hazardous materials and wastes and for integrating environmental impact and cost consideration issues into the systems engineering process. The offeror shall provide material safety data sheets (MSDS) and identify the components with which they are associated. Where practical, the offeror shall design to support recycling including the purchase and use of recycled products and closed-loop recycling of items such as batteries. The offeror shall support and provide data for the Crusader Program Environmental Life Cycle Assessment and Programmatic Environmental Safety and Health Evaluation leading to a statement required for testing, milestone decision review and type classification. Information to be supplied includes: part weight, energy and water consumption, waste outputs, and environmental, safety and health costs. The offeror's environmental reports and logs to the State are an acceptable substitute for government reports.

C.4.1.6 NBC Contamination Survivability (NBCCS):

C.4.1.6.1 The offeror shall satisfy the NBC Contamination Survivability (NBCCS) criteria for hardness, compatibility, and decontaminability specified in AR 70-75 and the quantitative NBC Survivability Criteria for Army Materiel (12 August 1991). Materials used in the design shall be selected accordingly.

C.4.1.6.2 The offeror shall provide assistance to UDLP and GDLS for the risk identification and NBCCS assessment of the engine design. This assistance shall include, but not be limited to: submission of drawings, performance criteria, design parameters, specifications, Human Factors information, failure mode information, description of operation, and a list of materials. A list of non-NBCCS qualified materials used in the design shall be generated, submitted, maintained, presented, and reviewed at regularly scheduled IPRs and reviews. UDLP and GDLS will prepare the NBCCS assessment with information provided by the offeror for each respective vehicle system. Material information shall be exchanged on a concurrent basis, to the maximum extent possible, allowing GDLS and UDLP to assist the offeror on NBCCS aspects of the design.

C.4.1.6.3 The Government shall provide the offeror with access to the Chemical Defense Materials Database for initial material screening. NBCCS Design Guidelines shall be provided and used as a reference.

C.4.1.7 Maintainability Prediction and Analysis: The offeror shall perform the following maintainability engineering tasks:

- Provide maintainability support to design reviews, formal and informal, including system level design reviews.
- Provide maintainability (MTTR, MR [total, DS and GS], fix forward, correctability within one hour and pre-op and total PMCS) data down to the LRU level to be used for system level maintainability modeling per the template in Enclosure T, Attachment 8, to include corrective maintenance and scheduled maintenance.
- Provide maintainability prediction data (see above) to be used by UDLP and GDLS for system level maintainability predictions.

C.4.1.8 Reliability Analysis and Prediction: The offeror shall provide reliability engineering analyses to include the following:

- Reliability Prediction Data. The offeror shall provide engine hardware and software reliability models and predictions to be used by UDLP and GDLS for system level reliability modeling and predictions per the template in Enclosure S, Attachment 8. Modeling and predictions shall be conducted at least to the LRU level. Where possible, reliability prediction data shall be based on demonstrated test or field operational data for the equipment or for equipment substantially similar to that proposed.
- Failure Modes. The offeror shall provide a preliminary list of expected engine failure modes to the LRU level, with probable causes for each. The list shall include the failure mode ratio (fraction of the total part or item failure rate), effects, detection method, and compensation provisions for each failure mode. The sum of the failure mode ratios for the part or item equals one.
- Reliability support to design reviews, reliability analysis questions/issues and failure scoring conferences.
- Reliability growth support for planning, tracking and assessing power pack growth through development, to include growth curves.

C.4.1.9 Testability:



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C.4.1.9.1.1 The offeror shall use Crusader RM&T Design Guidelines (Enclosure C to Attachment 8) for the purpose of guiding design toward achievement of specified Power Pack testability requirements for both Crusader and Abrams. The offeror shall provide design and dependency modeling data down to the LRU level to support the use of testability analysis (modeling and predictions) for requirement assessment and corresponding feedback into design for testability requirement compliance.

C.4.1.9.2 The offeror shall develop an integrated diagnostic strategy (embedded and external) that defines the interface between the engine, its embedded software, the operator and the maintainer on a flow of information basis (e.g., symptom recognition). The diagnostic strategy shall contain a logic decision tree that identifies a category of particular operator input (i.e., failure mode, PMCS condition, etc.) and identifies steps to make a corrective or scheduled maintenance decision. The diagnostic strategy will reflect categorical equipment differences (electrical, mechanical, system, subsystem) and diagnostic approaches.

C.4.1.9.3 The engine shall have on-vehicle embedded diagnostics capability. The objective of an embedded diagnostics system is to eliminate the need for off board diagnostic/test equipment at the tactical field level, improve maintenance and readiness, reduce operations and support costs and enable the Army's anticipatory logistics system. Further, the data provided will enable predictive maintenance, prognostics and anticipatory logistics.

C.4.1.9.4 The engine shall be capable of performing health monitoring and health checks using embedded resources of the weapon system to the maximum extent possible. This capability shall include system level diagnostics and fault isolation that integrates the engine with the platform. Weapon system on board processing will use data to provide the health check and diagnostics information on board, and output information sufficient to provide system health monitoring, accurate diagnostic and fault isolation, and robust predictive and prognostic capability.

C.4.1.9.5 The offeror shall develop a prognostics strategy whose primary consideration is condition monitoring of equipment and determination of prognostics results (e.g., scheduled maintenance, corrective maintenance, use of redundant equipment to complete a mission in a degraded mode, or mission effort). The offeror shall implement the prognostic strategy by incorporating in the engine design the prognostic sensors, wiring and software hooks for prognostic data collection and mitigation.

**C.4.1.10 Configuration Management:**

C.4.1.10.1 . Using the Crusader Configuration Management Plan (CMP) as a guideline, (Enclosure P to Attachment 8), the offeror shall prepare a CMP for the configuration management (CM) of offeror designed hardware and software for both Abrams and Crusader.

C.4.1.10.2 Offeror prepared engineering data and related configuration documentation shall reflect the product structure, as-designed configuration and as-built configuration for all deliverable hardware and software products. This data shall be entered into the Integrated Data Environment (IDE) and made available to GDLS and UDLP for viewing and comment.

C.4.1.10.3 The offeror shall prepare for and participate in annual CM reviews to evaluate the effectiveness of the CM program. The offeror will be audited during development to verify Software Configuration Management (SCM) process implementation in conformance to the contractor prepared Software Development Plan (SDP) and CMP.

C.4.1.11 Parts Standardization and Control: The offeror shall adhere to the provided design data/guidelines for the Parts Control Program (Enclosure Q to Attachment 8) and request deviation authorization from the COR. The offeror shall perform parts control and standardization activities at the subsystem and sub-tier levels concurrent with the objective subsystem configuration. The parts control process shall be applied as defined in the Parts Standardization Process Plan (Enclosure E to Attachment 8) and the SEMP (Enclosure D to Attachment 8) for both Abrams and Crusader. The offeror shall use parts that are listed in the Standard Parts Pick List (SPPL) (Enclosure H to Attachment 8) and the Crusader Program Parts Selection List (PPSL) (Enclosure G to Attachment 8). Part selection, identification of additional PPSL candidate parts and the processing of nonstandard part requests received from other contractors or vendors shall be the responsibility of the offeror. The offeror shall flow down parts control and standardization requirements to other contractors and vendors. The offeror shall use the Standard Parts Library provided by in IDE for all design modeling efforts.

**C.4.1.12 Product Assurance:**

C.4.1.12.1 The offeror shall support compliance with ISO 9001 requirements by: maintaining a Quality Program Plan (QPP), a Software Quality Program Plan (SQPP), and acceptable product assurance procedures; producing quality metrics; and preparing status reports. The offeror shall participate in periodic Continuous Quality Improvement (CQI) meetings. The offeror shall support on-site audits/assessments and source inspections performed by the Government. The offeror shall perform periodic internal audits to assure that design/model control, CM, and HW/SW engineering development processes are performed in accordance with documented procedures. The offeror shall validate product specifications, witness software acceptance testing, and review hardware drawings/software products.

C.4.1.12.2 The offeror shall support future Abrams production and Crusader EMD manufacturing by implementing process control, inspection, final product acceptance, and supplier control plans; managing material nonconformance/corrective actions; and maintaining quality records. The offeror shall deliver inspection and acceptance test records (actual measurements rather than 'in or out of specification' annotations), first article/first piece inspection results, and material/process certifications as

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specified in the offeror's procurement documentation, i.e., Supplier Quality Assurance Provisions KA-015 (as tailored). The offeror shall specify sub-tier supplier quality requirements in procurement documents, define acceptance criteria (including defect history of delivered products), validate quality records conform to offeror's requirements, perform or witness acceptance tests, and perform source/receiving inspections. The offeror shall support requirement verification testing by validating results and participating on FRACAS review boards.

C.4.1.13 Specialty Engineering Data: The offeror shall provide the following informal engine/power pack data in accordance with the SOW requirements. All data will be prepared/submitted in contractor format. Initial input is required 90 days after contract award (ACA) and shall be updated quarterly.

- Crew operation and maintenance task analysis for inclusion into the Human Engineering Design Approach Document - Operator (HEDAD-O) using DI-HFAC-80747 as guidance.
- Maintainer task analysis for inclusion into the Critical Task Analysis and Human Engineering Design Approach Document - Maintainer (HEDAD-M) using DI-HFAC-80747 as guidance.
- MPT Analysis report
- Material safety data sheets (MSDS)
- Maintainability Predictions
- Reliability Prediction
- Failure Modes List
- Testability Data
- Power Pack data to maintain the Hazard Tracking System
- Power Pack data needed to generate Safety Assessment Reports (SARs) for delivery of units to government test ranges. Data shall be provided when in time to ensure all data can be integrated for SAR development.
- Engine data needed to support System Safety Working Group Meetings (SSWGs).

C 4.2 Interface Control Documents and Management:

C.4.2.1 Interface Control Documents shall be developed and maintained to: (1) describe all interface requirements (e.g. mechanical, electrical, hydraulic, software) between common engine and any engine specific accessory components/hardware required to make the common engine compatible with each vehicle system (B-Kit ICD), and (2) describe all interface requirements between the Abrams and Crusader engines and any interfacing systems on each vehicle (A-Kit ICDs).

C.4.2.1.1 The B-Kit ICDs shall be delivered with the proposal and included in the contract. The Abrams A-Kit ICDs shall be delivered within 90 days after contract award. The Crusader A-Kit ICDs will be developed in conjunction with UDLF as the Crusader Vehicle System matures.

C.4.2.1.2 The ICDs shall be prepared in contractor format, subject to the approval of the Government. Once approved by the Government, the ICDs shall not be changed without written approval of the COR. The offeror shall maintain interface control and manage changes to these requirements and interfaces in accordance with the following requirements:

C.4.2.2 Physical Interfaces:

C.4.2.2.1 The offeror shall develop and maintain detailed solid models of the engine to include dimensions, alignment tolerances, assembly/attachment points, weight, density, moments of inertia and center of gravity information. The solid models shall be developed using ProENGINEER(tm) by Parametric Technology Corporation in accordance with the requirements and guidelines for solid modeling provided by the Government. UDLF and GDLS will use these solid models to roll-up the system model and conduct system integration assessments and analyses (e.g., interference checks; determination of vehicle center of gravity; dynamic modeling; etc.).

C.4.2.2.2 The offeror shall support the program Physical Interface Working Group for the Crusader and Abrams and the physical interface change control process. These working group(s) are the central authority for managing mechanical interface issues, and meets on a regular (monthly) basis. The offeror shall support the creation and maintenance of interface documents to include mounting provision (MP) data sheets and power pack space claim models.

C.4.2.3 Electrical/Electronic Interfaces:

C.4.2.3.1 The ACCE Program uses the System Sizing Model (SSM) for the characterization of all electrical interfaces within the Crusader and Abrams vehicle systems. The SSM is comprised of the Cable Interconnect Diagrams (CID) for each vehicle and the Component Data Set (CDS) database. The CIDs are used to capture the cable connectivity of major components and assemblies. The CDS is used to capture the detail electrical characteristics and behaviors of each electrical component (sensor, actuator, cable, etc.) in the system. The offeror shall use the CIDs and CDS to define electrical/electronic interfaces. The Government will provide electronic access to both the CID and CDS. [Note: The CDS database is designed for compatibility with Microsoft Windows95/98 using Microsoft Access97.]

C.4.2.3.2 The offeror shall provide usage and interface data for all engine electrical/electronic components. Data shall be of

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sufficient detail and accuracy to support the following:

- generation of interface control documentation through the CDS database
- design of interface cabling
- design of interface control and power distribution circuitry
- verify use of Standard Electronics has been maximized
- verify use of Common (electrical) parts has been maximized

C.4.2.3.3 The offeror shall perform and support change management using the prime contractor's EEI SSM Change Notice Process in accordance with the following:

Informal Changes	EEI SSM CN	"chnng_proc.ppt"
Formal Changes	EEI PROCESS SSM CN	"ssm_cn.ppt"

C.4.2.3.4 The offeror shall support the program Electrical System Interface Working Group (ESIWG) and electrical/electronic change control process. The ESIWG is the Crusader and Abrams central authority for managing electrical/electronic interface issues, and meets on a regular (monthly) basis.

C.4.2.4 Electrical/Logical (Software) Interfaces:

C.4.2.4.1 The offeror's electronic hardware and software shall be compatible with the Crusader and Abrams vehicle electronics architecture and software architecture interfaces. If under this contract, new software is developed or commercial off the shelf (COTS) software is modified by 35% or more, the software must conform with DOD Joint Technical Architecture (FTA) and IEEE/EIA ISO 12207.

C.4.2.4.2 The offeror shall use models and simulations to emulate the signals and the data exchanged at electrical and logical interfaces of the power pack hardware and software. Models and simulations (e.g., object models, stimulators, emulators and simulators) will be used to replicate sub-system features for the purpose of early design iteration, interface definition and integration evaluation. The offeror shall use these models and simulations to perform design analyses/validations, assess functionality and conduct performance measurements and predictions and assess timing and states/modes transition effects.

C.4.2.4.2.1 Simulation, Emulation and Stimulation (SES) is a software development activity used to describe the use of low- and high-fidelity models. The offeror shall use SES to achieve early verification and validation of electrical, electronic and software interfaces.

C.4.2.4.2.2 Low Fidelity Models: The low fidelity models are used to simulate interfaces between CSCIs and are useful during CSCI or qualification testing when either the target hardware or interfacing software is not available. These models are executed on workstations using the Lynx Operating System (OS) and are valuable for interface verification. For Abrams, these models are executed on workstations using XWindows. The offeror shall use low fidelity models to verify and validate external power pack interfaces early in development (i.e., prior to the availability of target hardware and software).

C.4.2.4.2.3 High Fidelity Models (Crusader Only): The high fidelity models are developed using MatrixX on workstations provided to the contractor. These models are high-resolution models used to replicate the behavior of the interfacing hardware. The offeror shall use high fidelity models to perform design analysis and validation, conduct performance measurements and predictions, and assess timing and mode transition effects early in development (i.e., prior to the availability of target hardware).

C.4.2.4.2.4 The offeror shall deliver simulator(s) and emulator(s) of the engine external interfaces and support integration of these products into UDLP's SIF and GDLS' SIL. The simulator(s) and emulator(s) shall consist of both offeror-developed software and UDLP/GDLS-supplied hardware. Delivery of the emulators and simulators shall be achieved in order to support early integration of the engine electrical/electronic controllers with external vehicle interfaces.

C.4.2.4.3 The offeror shall support the program Software Interface Working Group and software interface change control process. This working group is the central authority for managing software interface issues, and meets on a regular (monthly) basis.

C.4.2.4.4 The offeror shall support the program Automotive Controls Interface Working Group (ACIWG). This working group is the central authority for managing automotive controls/mobility interface technical issues and meets on a regular (monthly) basis. The focus of the ACIWG is on identifying and resolving the technical issues addressing vehicle electronics and embedded software which impact the mobility systems interface definitions or design, vehicle electronics/embedded software system architecture, and mobility systems hardware/software component commonality.

C.4.3 Technical Data:

C.4.3.1 The offeror shall prepare and maintain technical data using MIL-DTL-31000 as a guide. Data shall include the Engineering Bill of Materials (EBOM), three dimensional (3D) solid models, two dimensional (2D) assembly and detail part drawings

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(derived from 3D solid models), test plans/procedures, detailed specifications, and any other information necessary to verify the engine, transmission, power pack and propulsion system designs meet all requirements. The offeror shall develop product drawings and associated lists using MIL-STD-100G and ASME Y14.24M-1989 as guides. Drawings shall provide a level of detail and design disclosure equivalent to product drawings as defined in MIL-DTL-31000. Drawing practices shall be in accordance with the attached (Enclosure B to Attachment 7) Design Drawing Requirements, use the standard Abrams and Crusader drawing formats defined in ProEngineer, and be identified with the offeror's assigned drawing numbers and CAGE Code. Product marking, based on the requirements of MIL-STD-130, shall be defined in the applicable drawing notes. All technical data will be generated and disseminated electronically using IDE.

C.4.3.2 This is an International System of Units (SI) program, and the offeror shall provide physical interfaces conforming to this practice. All dimensions and tolerances used in reports, specifications and drawings developed under this contract shall be given in metric units. Guidance on metric design requirements is provided in IEEE-268. Components shall be designed and produced in metric, unless there is a performance penalty, a cost penalty, or items are unavailable in metric, then soft conversion metrics are acceptable. Mill-run purchased materials and Commercial Off the Shelf (COTS) components are excluded from the metric requirement.

**C.5 System Test and Evaluation:**

C.5.1 General: It is intended that the offeror and Army jointly develop a test program which validates the offeror's approach for achieving the specified program objectives. Offerors are requested to propose a joint Government/contractor test concept that: (1) meets the overall milestone schedules in Attachment 2, (2) provides a high degree of confidence that the system meets the integration and performance requirements, with particular emphasis on durability/reliability, and a low risk transition to production, and (3) takes advantage of common test data between the offeror and Army testing programs for both Abrams and Crusader. The following are the minimum desired test requirements:

C.5.1.1 Test Plans: The offeror shall develop and submit test plans detailing the necessary engineering development tests, performance verification tests, and system verification tests necessary to verify engine, transmission, power pack and propulsion system characteristics and performance.

C.5.1.2 Failure Reporting and Corrective Action System (FRACAS): The offeror shall employ a FRACAS to maintain a history of test configurations, test results, test incidents and corrective actions for all contractor and Government testing. FRACAS will be implemented for all engine, transmission and power pack testing. The offeror shall record test incidents during all contractor testing and make them available to the Government. During Government testing, the Government will use Test Incident Reports (TIRs) and Corrective Action Reports (CARs) in the Government Army Test Incident Reporting System (ATIRS) database. For developmental configuration testing, the offeror's internal FRACAS is acceptable; for Abrams production verification and Crusader objective configuration testing, the offeror shall use ATIRS. The offeror shall establish a Failure Review Board (FRB) to provide a technical forum for review and resolution of hardware and software failures. In addition, the contractor shall participate in the Government Mobility Element FRB, as required.

**C.5.2 Phase I Test and Evaluation Prototype Quantities:**

C.5.2.1 Abrams: The Army will require a total of thirteen (13) production representative prototypes. Seven (7) prototype engines will be fully integrated into Abrams tanks. The remaining six (6) prototypes will be used for stand alone bench testing and as spares. The prototype engines to be delivered by the offeror will support the Army's Abrams test and evaluation concept as summarized below.

<u>Quantity</u>	<u>Purpose</u>
1 Engine	Propulsion System Integration Evaluation in a Prototype Engineering tank in GDLS SIL
1 Engine	Propulsion System Installation Evaluation in a Prototype Logistics tank at the GDLS Sterling Logistics Center
5 Engines	Propulsion System Prototype Test Vehicles at Army Test Sites
2 Engines	Power pack Engineering/Testing/Logistic Evaluation at Engine Developer
1 Engine	Power pack testing at TACOM-TARDEC Propulsion Test Laboratory
1 Engine	Transmission Developer/Manufacturer
2 Engines	Part of the Propulsion Systems Spares for Army Test Program

C.5.2.1.1 The Army intends to test the performance and reliability of the propulsion system as integrated in the Abrams Vehicle System. The Army's system level integration and performance verification testing is expected to last approximately 20 months.

C.5.2.2 Crusader: The Crusader prototype engines to be delivered under this contract will be tested as part of the Crusader integrated power pack. The Army will require a total of eleven (11) power packs to be integrated under the UDLP system integration contract; two (2) power packs may reflect a developmental configuration and will be used to acquire performance data to support MS II. The remaining nine (9) power packs will reflect an objective configuration suitable for Crusader prototype vehicle installation and test. The breakdown of the Crusader power pack test and evaluation quantities are summarized below:

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Quantity

Purpose

2 Engines	Power Pack Testing as part of Contractor MS II Performance Testing
4 Engines	Power Pack Contractor Development Testing
1 Engine	Power Pack Contractor Performance Verification PTL Testing
1 Engine	Power Pack Chassis IAT&C at UDLP-designated Integration Site
1 Engine	Power Pack Vehicle IAT&C at UDLP System Integration Facility
2 Engines	Test Spares

C.5.3 Contractor Testing:

C.5.3.1 General. The objective of contractor testing is to verify compliance of the engine with the performance and integration requirements prior to delivery of prototypes to the Government. The offeror's test effort should include a logical sequence of component, subsystem and system level hardware and software tests, including models and simulations to demonstrate acceptable system integration and compliance with performance and supportability requirements in the systems specification. Deficiencies found during this testing should be corrected by the offeror and incorporated in the delivered design hardware and software.

C.5.3.2 Abrams Contractor Testing (Lab Test Cell Environment): Two engines shall remain at the offeror's facility to support in-house engineering and test cell testing. At a minimum, those engines shall be operated to the Abrams 1000-hour test as specified in Attachment 4. Required engineering data will be collected, analyzed and conformance to specification requirements will be determined. As each engine completes lab cell testing it will undergo a tear-down inspection for wear patterns, weaknesses and/or incipient failures.

C.5.3.3 Abrams Contractor Testing (In-vehicle): The Army will assess the integration and installation of two (2) propulsion systems. One (1) in M1A1 tank and one (1) in an M1A2 SEP Abrams tank. Integration is defined as that portion of the non-recurring development program that involves packaging all the systems and subsystems of the propulsion system into a single concept that optimizes the system performance of the vehicle. Installation is defined as that portion of the recurring production or retrofit program associated with installing the propulsion system into the vehicle. The M1A2 SEP integration/installation will be evaluated in an Engineering tank located in GDLS' shop/software SIL facility. The M1A1 integration/installation will be evaluated in a Logistics (M1A1) tank located at GDLS' Log Center.

C.5.3.4 Crusader Contractor Power Pack Testing:

C.5.3.4.1 For Crusader, the offeror shall allocate two (2) engines (developmental configuration acceptable) for early power pack performance testing during PDRR. The test results will be used by the Government to demonstrate the achievability of the Crusader MS II mobility exit criteria. Engine, transmission and power pack test results must be available no later than 5 months prior to the scheduled MS II decision review.

C.5.3.4.2 Concurrently, the offeror will develop the objective configuration engine required to support the development plan and objectives. A total requirement for nine (9) objective configuration engines is anticipated to support Crusader power pack development during PDRR. The offeror will allocate four (4) objective configuration engines for offeror in-house engineering development testing. In addition, the offeror shall allocate one (1) engine for power pack performance verification testing. This testing will encompass performance verification of all power pack performance specification requirements (excluding those beyond the capabilities of the test cell) and culminate with the conduct of the TACOM Combat Vehicle 600-Hour Mission Profile test. The offeror shall also provide one (1) engine to support chassis integration activities at the Crusader chassis integration site, and one (1) engine to support Crusader vehicle integration activities in the UDLP System Integration Facility (SIF). The emphasis of these IAT&C activities will be on the electrical/electronic and software integration of the engine with the chassis and vehicle respectively. Two (2) spare objective configuration engines are required to address program contingencies as required.

C.5.4 Abrams Government Testing (In-vehicle): Five engines/propulsion systems will be required for prototype vehicle (M1A1 and M1A2 SEP) testing at government test sites. Three (two at YPG and one at APG) propulsion systems will be utilized for Reliability - Durability endurance testing and will accumulate no less than 7500 Abrams OPMODE miles (750 engine hours) each. Scoring of propulsion system failures will be per Abrams Engine/Power train Failure Definition. Two propulsion systems will be used for Engineering in-vehicle performance evaluation, one at APG and one at YPG. Operation in an extreme cold environment will be evaluated in the cold chamber at APG as part of the performance test.. The Government will assess the merits of the design against Abrams fire power specifications. In that regard, the integration must provide sufficient hydraulic performance (pressure and flow rates) to allow the Gun/Turret Drive System to meet its requirements to rapidly slew the turret, elevate the gun and accurately move the gun and turret in response to the target tracking data from the Gunner's Primary Sight or the Commander's Independent Thermal Viewer.

C.5.5 Test Support: The offeror, under this contract, shall support power pack installation, integration and test at each site for each power pack asset. During testing, the offeror is expected to provide full engineering and logistics support to include spare/repair parts, tools, special tools, test equipment, maintenance support and failure analysis for the engine/power pack.

<p align="center"><b>CONTINUATION SHEET</b></p>	<p align="center"><b>Reference No. of Document Being Continued</b></p> <p align="center"><b>PIIN/SIIN</b> DAAE07-00-R-N061 <b>MOD/AMD</b></p>	<p align="center"><b>Page 22 of 99</b></p> <p align="center">REPRINT</p>
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**Name of Offeror or Contractor:**

During Propulsion Test Lab (PTL) testing, the offeror shall provide engineering, maintenance and logistics support; Army technicians are available to physically conduct the PTL tests. The offeror shall also support vehicle chassis integration, assembly test and check-out (IAT&C) at the Crusader chassis integration site, and vehicle IAT&C at the at the UDLF System Integration Facility (SIF) and the GDLS SIL and Logistic Center. The IAT&C will be performed to ensure the proper physical and functional integration of power pack hardware, electronics/firmware and software with the chassis and the vehicle respectively. Offeror support during IAT&C shall include on-site engineering support to perform integration activities, troubleshooting/failure analysis and repair.

**C.6 Government Industrial Plant Equipment (IPE):**

The Government does not intend to purchase any new IPE to support this contract.

**C.7 Logistics:** The offeror shall plan, implement, execute, and manage an Integrated Logistics Support (ILS) program focused on design influence, development of support data, and preparation for supporting Abrams/Crusader with an Integrated Life-Cycle Support Environment for engine development. The ILS program shall be structured to ensure that the offeror's efforts consider logistics supportability integrated with the design process. The Offeror's Scope of Work shall address the following elements required to develop, field, and support the Engine/Power-Pack in accordance with the Enclosures in Attachment 6.

**C.7.1 Maintenance and Diagnostics planning-** The offerors shall develop a maintenance concept that is consistent with the Army's Two Level Maintenance concept (Enclosure A, attachment 6), and shall consider Anniston Army Depot for Depot Level Repair. The Offeror will also consider contractor support. On-board, built-in fault isolation/diagnostic/prognostic features should preclude the need for any external engine test equipment at the tactical field level. Any external requirements for diagnostics shall be compatible with the Integrated Family of Test Equipment (IFTE) and Direct Support Electrical System Tests Sets (DSESTS).

**C.7.2 Supply Support -** The offerors shall develop and implement an approach to meeting the spare and repair part support requirements to comply with the Army's readiness goal of 90 percent.

**C.7.3 Technical Data.** The offeror shall develop and deliver preliminary technical data to include provisioning data, TM/IETM, repair/spare parts list, description /list of all special tools & test equipment, and Maintenance /Repair instructions.

**C.7.4 Packaging -** The offeror shall develop all required packing and containers design to support the Engine/Power Pack.

**C.7.5 Training/Training Aids and devices -** The offeror shall develop preliminary Training Plans to include preliminary Program of Instructions and Training Aids and devices. The offeror shall coordinate with the Simulation, Training and Instrumentation Command (STRICOM) and to ensure that the use of existing training aids and devices is maximized.

**C.7.6** The ILS program shall focus on achieving a significant reduction in O&S costs while increasing end item readiness. The offeror shall develop and implement a tailored LSA process as the primary method for these goals using the former MILSTD 1388-1A and MILSTD 1388-2B as guides. The LSA process shall target identification of critical supportability requirements and resolution of potential problems through design solutions. The offeror shall furnish an Integrated Logistics Support Plan in contractor format in accordance with the Integrated Master Schedule that describes the ILS program. All elements of ILS must be developed in coordination with the system engineering effort and with each other. Tradeoffs may be required between elements in order to acquire a system that is affordable (lowest LCC), operable, supportable, sustainable, transportable, and environmentally sound within the resources available.

The developer shall perform the LSA to a level , which addresses key support drivers, critical tasks, and source data for operator organizational and selected direct support level technical publications and training. As a part of the LSA process, the developer shall identify support equipment and special facilities requirements. Required LSA tasks and corresponding levels of detail below.

Description	Developer Requirements*
Program/design reviews	<ul style="list-style-type: none"> <li>- Support program/system level reviews, Support Integrated Product Team (SIPT) meetings</li> <li>- Support may include input to briefing slides, attendance, and briefings</li> </ul>
Standardization	<ul style="list-style-type: none"> <li>- Define support-related design constraints based on standardization</li> <li>- Provide design recommendations for standardization approaches</li> </ul>
Design factors	<ul style="list-style-type: none"> <li>- Influence hardware/software design, including support equipment, by identifying technological advancements and state-of-the-art design approaches which will enhance system support</li> <li>- Document and track specific design recommendations and improvements</li> </ul>
Functional requirements identification	<ul style="list-style-type: none"> <li>- Provide listing of all tasks required to support hardware/software</li> <li>- Task list should be substantiated by RCM, FMECA, other analysis or Spec.</li> </ul>
Support alternatives	<ul style="list-style-type: none"> <li>- Develop support alternatives to correct supportability design deficiencies and reduce or simplify</li> </ul>

Name of Offeror or Contractor:

- support resources
- Alternatives/tradeoffs
  - Include support considerations in all component level trade studies
  - Perform level of repair analysis -
  - Document trade-off including assumptions
- Task analysis
  - Perform detailed task analysis of crew/unit level task and onboard direct support tasks.
- Test and evaluation
  - Provide planning inputs to supportability demonstration.

\*\*\* END OF NARRATIVE C001 \*\*\*

Name of Offeror or Contractor:

SECTION D - PACKAGING AND MARKING

	Regulatory Cite	Title	Date
D-1	52.247-4003 (TACOM)	CLEARANCE AND DOCUMENTATION REQUIREMENTS--SHIPMENTS THROUGH THE DEFENSE TRANSPORTATION SYSTEM (DTS) FROM OCONUS CONTRACTOR FACILITIES (F.O.B. ORIGIN)	OCT/1997

(a) All shipments to water or air ports for transshipment to (i) destinations in the continental United States (CONUS), or (ii) other areas outside the continental United States (OCONUS), are subject to clearance and documentation procedures in accordance with the requirements of DOD 4500.32-R, Military Standard Transportation and Movement Procedures (MILSTAMP).

(b) Notwithstanding other requirements in this contract with respect to marking of shipments, all shipments moving through the DTS will be marked in accordance with the requirements of MILSTAMP, MIL-STD-129N, Military Standard Marking for Shipment and Storage, and ANSI/AIM-BC 1.

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D2 Preservation, Packing and Marking

D2.1 Packaging

Each prototype engine shall be processed in accordance with the contractor's standard commercial practice. The contractor's standard commercial procedures shall protect each prototype during shipment, handling and temporary storage. Adequate protection and security must be given to equipment and components susceptible to damage or loss from pilferage, vandalism, vibration, corrosion or other environmental deterioration and other conditions incidental to the shipment of each prototype.

D2.2 Marking

Each prototype shall be marked in accordance with ASTM-D-3951 for shipments to the Department of Defense

D2.3 Preservation

Items shall be free from dirt and other contaminants which would contribute to the deterioration of the item or which would require cleaning prior to reassembly. Unprotected exterior metal surfaces of the item susceptible to corrosion or deterioration shall be provided protection, such as contact preservative coatings.

\*\*\* END OF NARRATIVE D001 \*\*\*



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SECTION E - INSPECTION AND ACCEPTANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
E-1	52.246-5	INSPECTION OF SERVICES - COST-REIMBURSEMENT	APR/1984
E-2	52.246-8	INSPECTION OF RESEARCH AND DEVELOPMENT -- COST-REIMBURSEMENT	APR/1984
E-3	52.246-4024 (TACOM)	SUBSTITUTING COMMERCIAL TEST RESULTS FOR REQUIRED CONTRACT TESTS	SEP/1992

1. GENERAL. At your request, we may delete all or some of the Government or contractor conducted tests required by this contract, under the following conditions:
- a. You have (or your supplier has) previously supplied the identical item to us and we’ve accepted it, or:
  - b. You have commercial test reports, performance data, analytical data, or vendor reports demonstrating that the item meets the contract requirements.
2. HOW TO SUBMIT A TEST DELETION REQUEST.
- a. BEFORE CONTRACT AWARD - Submit your request along with your bid or proposal. Make sure that your bid or proposal includes an alternate price (that reflects how your basic price would change if we approved your request).
  - b. AFTER CONTRACT AWARD - Send your requests to (USA TACOM, Warren, MI 48397-5000, ATTN: AMSTA-LC-CAPA at least 45 days before you’re scheduled to make delivery of the affected end item.
  - c. ALL REQUESTS MUST -
    - (1) identify the test(s) you want deleted;
    - (2) state the basis for your request;
    - (3) include a list of configuration changes made;
    - (4) demonstrate that you meet the conditions in paragraph 1a or 1b above;
    - (5) include proposed amount of equitable adjustment (if change is requested after award)
3. SUPPORTING DATA. If we agree to delete a test or tests, you must keep the data you used to support your request for four years from the day we approved your request. You must provide us with this data if we ask for it.
4. CONTRACT ADJUSTMENT. If we agree to delete a test or tests after contract award, we may negotiate an equitable adjustment in the contract price, under the Changes clause of this contract.

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E-4	52.211-4069 (TACOM)	WELDING INSPECTOR QUALIFICATION REQUIREMENTS	SEP/1997
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- (a) INSPECTION: As the contractor, during performance of this contract you will verify weld quality and workmanship using qualified inspectors trained to perform these inspection functions. Acceptable qualification of your inspectors may be based on:
- (1) current or previous certification as an AWS Certified Welding Inspector; or
  - (2) current or previous certification by the Canadian Welding Bureau (CWB); or
  - (3) inspection performed by an engineer or technician who is competent in the use of weld inspection techniques and equipment, on the basis of (i) formal training or (ii) experience, or both, in metals fabrication, inspection, and testing.
- (b) NON BALLISTIC VISUAL INSPECTION. You will perform all non-ballistic visual inspections of weld quality and workmanship for structural steel in accordance with Section 6 of AWS D1.1-96. For structural aluminum, you may perform non-ballistic visual inspections of weld quality and workmanship using the guidelines given in MIL-STD-370A, dated 21 Sep 93.
- (c) BALLISTIC VISUAL INSPECTION. You will perform all ballistic visual inspections in accordance with section 6 of the UDLP/TACOM Ground Combat Vehicle Code--Aluminum, dated July 1996. Copies of this document can be obtained by written request to:

Commander, US Army Tank-automotive and Armaments Command  
ATTN: AMSTA-TR-E/Materials  
Warren, MI 48397-5000

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**Name of Offeror or Contractor:**

E-5	52.246-4025,	HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT--TACOM QUALITY SYSTEM	OCT/1997
	ALT I (TACOM)	REQUIREMENT (NEW DESIGN/DESIGN CONTROL/COMPLEX OR CRITICAL ITEM)	

(a) As the contractor, you shall implement and maintain a quality system that ensures the functional and physical conformity of all products or services you furnish under this contract. Your quality system shall achieve (i) defect prevention and (ii) process control, providing adequate quality controls throughout all areas of contract performance.

(b) Your quality system may be based on (i) international quality standards such as ISO 9001, or (ii) military, or (iii) commercial, or (iv) national quality standards. (NOTE, however, that quality systems conforming to ISO 9002 or MIL-I-45208 or comparable are NOT acceptable for this contract.) You represent that your performance under this contract will be in accordance with your quality system, which is in compliance with:

- ( ) ISO 9001  
( ) QS 9000  
( ) ANSI/ASQ Q9001  
( ) Other, specifically: \_\_\_\_\_

(Note: if you check the "Other" block because you intend to use an in-house quality system, or one based on a commercial, national, or international system not identified above, then in addition to identifying your proposed system in the space above, to the right of the word "Other," you must attach a description of this system to your offer in response to the solicitation, so that we can assess its suitability. If you receive a contract award, your proposed system will be required by the contract.)

(c) Certification of compliance for the quality system you identify above, by an independent standards organization or auditor, does not need to be furnished to us under this contract. However, you may attach a copy of such certification with your offer in response to the solicitation, as proof of system compliance.

(d) At any point during contract performance, we have the right to review your quality system to assess its effectiveness in meeting contractual requirements.

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E-6	52.246-4028 (TACOM)	INSPECTION POINT: ORIGIN	FEB/1994
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Inspection Point: ORIGIN

We will inspect the supplies as described elsewhere in this solicitation/contract and before acceptance. Fill-in the location, contractor's or subcontractor's plant, where origin inspection will occur.

CONTRACTOR'S PLANT: \_\_\_\_\_

(Address)                  (City)                  (County)                  (State)                  (Zip)

SUBCONTRACTOR'S PLANT: \_\_\_\_\_  
(Name)

(Address)            (City)            (County)            (State)            (Zip)

(End of Clause)

E-7                    52.246-4029                    ACCEPTANCE POINT: ORIGIN                    FEB/1998  
(TACOM)

Acceptance Point: ORIGIN

We'll accept these supplies at the address or addresses designated in the Section E clause entitled INSPECTION POINT. When F.O.B. is destination and once we accept title to the supplies, we'll allow payment as long as you supply the proper evidence of shipment with the invoice. (See the Section I clause, FAR 52.247-48 - F.O.B. DESTINATION - EVIDENCE OF SHIPMENT and the Section I clause, FAR 52.246-16 - RESPONSIBILITY FOR SUPPLIES.).

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SECTION F - DELIVERIES OR PERFORMANCE

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
F-1	52.247-29	F.O.B. ORIGIN	JUN/1988
F-2	52.247-58	LOADING, BLOCKING, AND BRACING OF FREIGHT CAR SHIPMENTS	APR/1984
F-3	52.247-59	F.O.B. ORIGIN--CARLOAD AND TRUCKLOAD SHIPMENTS	APR/1984

F-4                    52.242-15                    STOP-WORK ORDER (AUG 1989) (ALTERNATE I (APR 1984))                    APR/1984

(a) The Contracting Officer may, at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop-work order is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either--

- (1) Cancel the stop-work order; or
- (2) Terminate the work covered by the order as provided in the TERMINATION clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected, and the contract shall be modified, in writing, accordingly, if--

- (1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
- (2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided, that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.  
(End of clause)

F-5                    52.227-4002                    DATA (SOFTWARE)                    APR/1985  
(TACOM)

All data deliverable under this contract shall be delivered in accordance with the quantities and schedules as specified on the Contract Data Requirements List (CDRL) DD Form 1423, and shall be delivered F.O.B. Destination to the following address:

Commander  
US Army Tank-automotive and Armaments Command  
ATTN: (See DD Form 1423, Block 14)  
Warren, MI 48397-5000

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F-6                    52.247-4005                    SHIPMENT OF SUPPLIES AND DETENTION OF CARRIERS EQUIPMENT                    OCT/1994  
(TACOM)

(a) Unless otherwise directed, shipment items under this contract in following order of priority:

- (1) Government Bill(s) of Lading or US Postal Services;
- (2) Commercial Bill(s) of Lading converted to Government Bill(s) of Lading at destination;
- (3) Prepaid Commercial Bill(s) of Lading with transportation charges entered as a separate item on the invoice; or
- (4) As otherwise instructed when the contract prohibits use of Government funds for transportation costs.

(b) The Contractor will request:

- (1) Government Bills of Lading and
- (2) Routing and other instructions, including MILSTAMP (Military Standard Transportation and Movement Procedure), as to the methods of shipment to be followed by the Contractor, or
- (3) Authorization to ship Commercial Bills of Lading to be converted to Government Bills of Lading at destination from the transportation office, administering DCMC, ten days before the materiel is ready for shipment. The Contractor must prepare

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and address the forms as directed by the Administrative Contracting Officer (ACO) or

(c) The Contractor and subcontractor(s) must allow prompt and convenient access of carrier's equipment to loading docks or platforms where the contract items supplies will be loaded. Any charges for detention of carrier's equipment shall be for the account of the Contractor, except when the detention is required or caused by the Government.

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**F7 DELIVERY SCHEDULE**

The schedule setforth in Section B of this document is the Government's desired delivery schedule. Also see Section C (C.2.1) Section L and Attachment 2 of this solicitation.

\*\*\* END OF NARRATIVE F001 \*\*\*

Name of Offeror or Contractor:

SECTION G - CONTRACT ADMINISTRATION DATA

	Regulatory Cite	Title	Date
G-1	52.204-7008 (TACOM)	MANDATORY USE OF GOVERNMENT TO GOVERNMENT ELECTRONIC COMMUNICATION	JUN/1999
	(a) All references in the contract to the submission of written documentation shall mean electronic submission. This includes Government to Government data not covered by the Government's Defense Contract Management Command ALERTS Program.		
	(b) See Section I, clause 52.204-7009, Mandatory Use of Contractor to Government Electronic Mail, for further guidance.		
	(c) Unless exempted by the Procuring Contracting Officer in writing, all written communication after contract award between Government agencies shall be transmitted electronically. (End of clause)		

**Name of Offeror or Contractor:**

## SECTION H - SPECIAL CONTRACT REQUIREMENTS

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
H-1	252.203-7002	DISPLAY OF DOD HOTLINE POSTER	DEC/1991
H-2	252.204-7000	DISCLOSURE OF INFORMATION	DEC/1991
H-3	252.204-7002	PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED	DEC/1991
H-4	252.205-7000	PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS	DEC/1991
H-5	252.211-7000	ACQUISITION STREAMLINING	DEC/1991
H-6	252.225-7001	BUY AMERICAN ACT AND BALANCE OF PAYMENTS PROGRAM	MAR/1998
H-7	252.225-7002	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS	DEC/1991
H-8	252.225-7009	DUTY-FREE-ENTRY--QUALIFYING COUNTRY SUPPLIES (END PRODUCTS AND COMPONENTS)	MAR/1998
H-9	252.225-7010	DUTY-FREE ENTRY--ADDITIONAL PROVISIONS	MAR/1998
H-10	252.231-7000	SUPPLEMENTAL COST PRINCIPLES	DEC/1991
H-11	252.234-7001	EARNED VALUE MANAGEMENT SYSTEM	MAR/1998
H-12	252.235-7011	FINAL SCIENTIFIC OR TECHNICAL REPORT	SEP/1999
H-13	252.242-7004	MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM	SEP/1996
H-14	252.246-7000	MATERIAL INSPECTION AND RECEIVING REPORT	DEC/1991
H-15	252.246-7001	WARRANTY OF DATA	DEC/1991
H-16	252.249-7002	NOTIFICATION OF ANTICIPATED CONTRACT TERMINATION OR REDUCTION	DEC/1996
H-17	252.251-7000	ORDERING FROM GOVERNMENT SUPPLY SOURCES	MAY/1995

H-18                    252.227-7036                    DECLARATION OF TECHNICAL DATA CONFORMITY                    JAN/1997

(a) All technical data delivered under this contract shall be accompanied by the following written declaration:

The Contractor, \_\_\_\_\_, hereby declares that, to the best of its knowledge and belief, the technical data delivered herewith under Contract No. DAAE07-\_\_\_\_\_ are complete, accurate, and comply with all requirements of the contract.

Date	Name and Title of Authorized Official
------	---------------------------------------

This written certification shall be dated and the certifying official (identified by name and title) shall be duly authorized to bind the Contractor by the certification.

(b) The Contractor shall identify, by name and title, each individual (official) authorized by the Contractor to certify in writing that the technical data are complete, accurate, and comply with all requirements of the contract. The Contractor hereby authorizes direct contact with the authorized individual responsible for certification of technical data. The authorized individual shall be familiar with the Contractor's technical data conformity procedures and their application to the technical data to be certified and delivered.

(c) Technical data delivered under this contract may be subject to reviews by the Government during preparation and prior to acceptance. Technical data are also subject to reviews by the Government subsequent to acceptance. Such reviews may be conducted as a function ancillary to other reviews, such as in-process reviews or configuration audit reviews.

(End of clause)

H-19 252.227-7037 VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA SEP/1999

(a) Definitions. The terms used in this clause are defined in the Rights in Technical Data-Noncommercial Items clause of this contract.

(b) Contracts for commercial items--presumption of development at private expense. Under a contract for a commercial item, component, or process, the Department of Defense shall presume that a Contractor's asserted use or release restrictions are justified on the basis that the item, component, or process was developed exclusively at private expense. The Department shall not challenge such assertions unless information the Department provides demonstrates that the item, component, or process was not developed exclusively at private expense.

(c) Justification. The Contractor or subcontractor at any tier is responsible for maintaining records sufficient to justify the validity of its markings that impose restrictions on the Government and others to use, duplicate, or disclose technical data delivered or required to be delivered under the contract or subcontract. Except under contracts for commercial items, the Contractor or subcontractor shall be prepared to furnish to the Contracting Officer a written justification for such restrictive markings in response to a challenge under paragraph (e) of this clause.

(d) Prechallenge request for information.

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(1) The Contracting Officer may request the Contractor or subcontractor to furnish a written explanation for any restriction asserted by the Contractor or subcontractor on the right of the United States or others to use technical data. If, upon review of the explanation submitted, the Contracting Officer remains unable to ascertain the basis of the restrictive marking, the Contracting Officer may further request the Contractor or subcontractor to furnish additional information in the records of, or otherwise in the possession of or reasonably available to, the Contractor or subcontractor to justify the validity of any restrictive marking on technical data delivered or to be delivered under the contract or subcontract (e.g., a statement of facts accompanied with supporting documentation). The Contractor or subcontractor shall submit such written data as requested by the Contracting Officer within the time required or such longer period as may be mutually agreed.

(2) If the Contracting Officer, after reviewing the written data furnished pursuant to paragraph (d)(1) of this clause, or any other available information pertaining to the validity of a restrictive marking, determines that reasonable grounds exist to question the current validity of the marking and that continued adherence to the marking would make impracticable the subsequent competitive acquisition of the item, component, or process to which the technical data relates, the Contracting Officer shall follow the procedures in paragraph (e) of this clause.

(3) If the Contractor or subcontractor fails to respond to the Contracting Officer's request for information under paragraph (d)(1) of this clause, and the Contracting Officer determines that continued adherence to the marking would make impracticable the subsequent competitive acquisition of the item, component, or process to which the technical data relates, the Contracting Officer may challenge the validity of the marking as described in paragraph (e) of this clause.

(e) Challenge.

(1) Notwithstanding any provision of this contract concerning inspection and acceptance, if the Contracting Officer determines that a challenge to the restrictive marking is warranted, the Contracting Officer shall send a written challenge notice to the Contractor or subcontractor asserting the restrictive markings. Such challenge shall-

- (i) State the specific grounds for challenging the asserted restriction;
- (ii) Require a response within sixty (60) days justifying and providing sufficient evidence as to the current validity of the asserted restriction;
- (iii) State that a DoD Contracting Officer's final decision, issued pursuant to paragraph (g) of this clause, sustaining the validity of a restrictive marking identical to the asserted restriction, within the three-year period preceding the challenge, shall serve as justification for the asserted restriction if the validated restriction was asserted by the same Contractor or subcontractor (or any licensee of such Contractor or subcontractor) to which such notice is being provided; and
- (iv) State that failure to respond to the challenge notice may result in issuance of a final decision pursuant to paragraph (f) of this clause.

(2) The Contracting Officer shall extend the time for response as appropriate if the Contractor or subcontractor submits a written request showing the need for additional time to prepare a response.

(3) The Contractor's or subcontractor's written response shall be considered a claim within the meaning of the Contract Disputes Act of 1978 (41 U.S.C. 601, et seq.), and shall be certified in the form prescribed at 33.207 of the Federal Acquisition Regulation, regardless of dollar amount.

(4) A Contractor or subcontractor receiving challenges to the same restrictive markings from more than one Contracting Officer shall notify each Contracting Officer of the existence of more than one challenge. The notice shall also state which Contracting Officer initiated the first in time unanswered challenge. The Contracting Officer initiating the first in time unanswered challenge after consultation with the Contractor or subcontractor and the other Contracting Officers, shall formulate and distribute a schedule for responding to each of the challenge notices to all interested parties. The schedule shall afford the Contractor or subcontractor an opportunity to respond to each challenge notice. All parties will be bound by this schedule.

(f) Final decision when Contractor or subcontractor fails to respond. Upon a failure of a Contractor or subcontractor to submit any response to the challenge notice, other than a failure to respond under a contract for commercial items, the Contracting Officer will issue a final decision to the Contractor or subcontractor in accordance with the Disputes clause of this contract pertaining to the validity of the asserted restriction. This final decision shall be issued as soon as possible after the expiration of the time period of paragraph (e)(1)(ii) or (e)(2) of this clause. Following issuance of the final decision, the Contracting Officer will comply with the procedures in paragraphs (g)(2)(ii) through (iv) of this clause.

(g) Final decision when Contractor or subcontractor responds.

(1) If the Contracting Officer determines that the Contractor or subcontractor has justified the validity of the restrictive marking, the Contracting Officer shall issue a final decision to the Contractor or subcontractor sustaining the validity of the restrictive marking, and stating that the Government will continue to be bound by the restrictive marking. This

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final decision shall be issued within sixty (60) days after receipt of the Contractor's or subcontractor's response to the challenge notice, or within such longer period that the Contracting Officer has notified the Contractor or subcontractor that the Government will require. The notification of a longer period for issuance of a final decision will be made within sixty (60) days after receipt of the response to the challenge notice.

(2) (i) If the Contracting Officer determines that the validity of the restrictive marking is not justified, the Contracting Officer shall issue a final decision to the Contractor or subcontractor in accordance with the Disputes clause of this contract. Notwithstanding paragraph (e) of the Disputes clause, the final decision shall be issued within sixty (60) days after receipt of the Contractor's or subcontractor's response to the challenge notice, or within such longer period that the Contracting Officer has notified the Contractor or subcontractor of the longer period that the Government will require. The notification of a longer period for issuance of a final decision will be made within sixty (60) days after receipt of the response to the challenge notice.

(ii) The Government agrees that it will continue to be bound by the restrictive marking for a period of ninety (90) days from the issuance of the Contracting Officer's final decision under paragraph (g)(2)(i) of this clause. The Contractor or subcontractor agrees that, if it intends to file suit in the United States Claims Court it will provide a notice of intent to file suit to the Contracting Officer within ninety (90) days from the issuance of the Contracting Officer's final decision under paragraph (g)(2)(i) of this clause. If the Contractor or subcontractor fails to appeal, file suit, or provide a notice of intent to file suit to the Contracting Officer within the ninety (90)-day period, the Government may cancel or ignore the restrictive markings, and the failure of the Contractor or subcontractor to take the required action constitutes agreement with such Government action.

(iii) The Government agrees that it will continue to be bound by the restrictive marking where a notice of intent to file suit in the United States Claims Court is provided to the Contracting Officer within ninety (90) days from the issuance of the final decision under paragraph (g)(2)(i) of this clause. The Government will no longer be bound, and the Contractor or subcontractor agrees that the Government may strike or ignore the restrictive markings, if the Contractor or subcontractor fails to file its suit within one (1) year after issuance of the final decision. Notwithstanding the foregoing, where the head of an agency determines, on a nondelegable basis, that urgent or compelling circumstances will not permit waiting for the filing of a suit in the United States Claims Court, the Contractor or subcontractor agrees that the agency may, following notice to the Contractor or subcontractor, authorize release or disclosure of the technical data. Such agency determination may be made at any time after issuance of the final decision and will not affect the Contractor's or subcontractor's right to damages against the United States where its restrictive markings are ultimately upheld or to pursue other relief, if any, as may be provided by law.

(iv) The Government agrees that it will be bound by the restrictive marking where an appeal or suit is filed pursuant to the Contract Disputes Act until final disposition by an agency Board of Contract Appeals or the United States Claims Court. Notwithstanding the foregoing, where the head of an agency determines, on a nondelegable basis, following notice to the Contractor that urgent or compelling circumstances will not permit awaiting the decision by such Board of Contract Appeals or the United States Claims Court, the Contractor or subcontractor agrees that the agency may authorize release or disclosure of the technical data. Such agency determination may be made at any time after issuance of the final decision and will not affect the Contractor's or subcontractor's right to damages against the United States where its restrictive markings are ultimately upheld or to pursue other relief, if any, as may be provided by law.

(h) Final disposition of appeal or suit.

(1) If the Contractor or subcontractor appeals or files suit and if, upon final disposition of the appeal or suit, the Contracting Officer's decision is sustained-

(i) The restrictive marking on the technical data shall be cancelled, corrected or ignored; and

(ii) If the restrictive marking is found not to be substantially justified, the Contractor or subcontractor, as appropriate, shall be liable to the Government for payment of the cost to the Government of reviewing the restrictive marking and the fees and other expenses (as defined in 28 U.S.C. 2412(d)(2)(A)) incurred by the Government in challenging the marking, unless special circumstances would make such payment unjust.

(2) If the Contractor or subcontractor appeals or files suit and if, upon final disposition of the appeal or suit, the Contracting Officer's decision is not sustained-

(i) The Government shall continue to be bound by the restrictive marking; and

(ii) The Government shall be liable to the Contractor or subcontractor for payment of fees and other expenses (as defined in 28 U.S.C. 2412(d)(2)(A)) incurred by the Contractor or subcontractor in defending the marking, if the challenge by the Government is found not to have been made in good faith.

(i) Duration of right to challenge. The Government may review the validity of any restriction on technical data, delivered



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or to be delivered under a contract, asserted by the Contractor or subcontractor. During the period within three (3) years of final payment on a contract or within three (3) years of delivery of the technical data to the Government, whichever is later, the Contracting Officer may review and make a written determination to challenge the restriction. The Government may, however, challenge a restriction on the release, disclosure or use of technical data at any time if such technical data.

(1) Is publicly available;

(2) Has been furnished to the United States without restriction; or

(3) Has been otherwise made available without restriction. Only the Contracting Officer's final decision resolving a formal challenge by sustaining the validity of a restrictive marking constitutes "validation" as addressed in 10 U.S.C. 2321.

(j) Decision not to challenge. A decision by the Government, or a determination by the Contracting Officer, to not challenge the restrictive marking or asserted restriction shall not constitute "validation."

(k) Privity of contract. The Contractor or subcontractor agrees that the Contracting Officer may transact matters under this clause directly with subcontractors at any tier that assert restrictive markings. However, this clause neither creates nor implies privity of contract between the Government and subcontractors.

(l) Flowdown. The Contractor or subcontractor agrees to insert this clause in contractual instruments with its subcontractors or suppliers at any tier requiring the delivery of technical data, except contractual instruments for commercial items or commercial components.

(End of clause)

H-20                      252.243-7000                      ENGINEERING CHANGE PROPOSALS                      SEP/1999

(a) The Contracting Officer may ask the Contractor to prepare engineering change proposals for engineering changes within the scope of this contract. Upon receipt of a written request from the Contracting Officer, the Contractor shall prepare and submit an engineering change proposal in accordance with the instructions of MIL-STD-973, in effect on the date of contract award.

(b) The Contractor may initiate engineering change proposals. Contractor initiated engineering change proposals shall include a "not to exceed" price or a "not less than" price and delivery adjustment. If the Contracting Officer orders the engineering change, the increase shall not exceed nor the decrease be less than the "not to exceed" or "not less than" amounts.

(c) When the price of the engineering change is \$500,000 or more, the Contractor shall submit-

(1) A contract pricing proposal using the format in Table 15-2, Section 15.408, of the Federal Acquisition Regulation; and

(2) At the time of agreement on price, or on another date agreed upon between the parties, a signed Certificate of Current Cost or Pricing Data.

(end of clause)

H-21                      52.204-4005                      REQUIRED USE OF ELECTRONIC COMMERCE                      DEC/1999  
(TACOM)

(a) All contract awards, modifications and delivery orders issued by TACOM will be issued electronically. The contractor has the option to receive these actions either via the Worldwide Web (WWW) or Electronic Data Interchange(EDI).

(b) Worldwide Web Distribution. The contractor will receive an electronic Notice of the Award, Modification, or Delivery Order via e-mail. If you choose the WWW option, you must download the file from the appropriate TACOM webpage:

Warren: [www.tacom.army.mil/acqcen/awd.htm](http://www.tacom.army.mil/acqcen/awd.htm)  
ACALA: <http://aais.ria.army.mil/AAIS/AWDINFO/index.htm>  
Picatinney: <http://procnet.pica.army.mil/Contracts/Index.htm>  
Red River Army Depot: <http://www.redriver.army.mil/contracting/Awards>  
Anniston Army Depot: <http://www.anadprocnet.army.mil>

(c) Electronic Data Interchange. If you choose to receive contract awards, modifications and delivery orders through EDI, they will be delivered electronically via the Federal Acquisition Network (FACNET). Federal Standard Version 3050 of Standard X12 from the American National Standards Institute (ANSI) will be used as the format for these electronic transactions.

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(i) The CCR registration, including the EDI 838 Trading Partner Profile, may be done electronically at the World Wide Web (WWW) site: <http://www.ccr2000.com> . In order to be registered to use EDI, you must use the long form for registration. Certification information, including information on the EDI 838 TPP, must be furnished to the Contracting Officer within 60 calendar days after contract award to complete networking requirements within the Government.

(ii) You must select a VAN from the official DoD approved list. DoD Certified VANs are listed at <http://www.acq.osd.mil/ec/ecip/index.htm> . If your VAN is later removed from the official list, or if you voluntarily drop your initially selected VAN, then you must switch to a VAN that remains on the official DoD approved list. You must maintain an active account on a DoD approved VAN for the entire duration of the contract, beginning no later than the 60th day after award.

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H-22                      52.216-4008                      STATUS OF FUNDS ON COST REIMBURSEMENT CONTRACTS/CLINS                      JUN/1989  
(TACOM)

The Contractor shall review the funding as it relates to work performed on the cost reimbursement Contract Line Item Numbers (CLINs) under this contract and shall provide to the Procuring Contracting Officer (PCO) a written determination of what, if any, funds are excess to requirements (leaving a reasonable amount for final overhead rate negotiations and other reasonably predicted requirements) and are available for deobligation. This review shall be coordinated with the Administrative Contracting Officer (ACO) and the written determination shall be accomplished within 120 days of completion of performance under the CLIN. The report shall be prepared in terms of dollars available per Purchase Request Order Number (PRON) unless requested otherwise by the PCO.

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H-23                      52.246-4026                      LOCAL ADDRESSES FOR DD FORM 250                      SEP/1999  
(TACOM)

(a) The contractor must provide copy of each Material Inspection and Receiving Report (DD 250) pertaining to this contract, to the addresses given below, using any one of the following three methods, which are listed in descending order of preference:

(1) Our first preference is for you to use electronic mail (e-mail), using the following two e-mail addresses:

(a) DD250@tacom.army.mil

and

(b) the buyer's e-mail address, as shown on the cover page of this contract, using the format:  
[buyer's e-mail name]@tacom.army.mil\_

(2) Our second preference is for you to use data facsimile (datafax) transmission, using these fax numbers:

(a) (810) 574-7552 and use "DD250 mailbox" in the "to:" block of your fax cover or header sheet; and  
(b) fax a copy to the buyer, using the fax number provided to you by the buyer.

(b) These copies meet the requirements for the Purchasing Office copy and the Army Inventory Control Manager copy listed in tables 1 and 2 of DFARS Appendix F.

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H.24 Design To Unit Rollaway Cost (DTURC) and Design to Operating and Support Cost (DTOSC)

The control of production unit costs of the engine and the operation and support cost of the engine (after fielding) are of paramount importance in achieving program objectives . Cost is a key design parameter and needs to be addressed on a continual basis during this common engine development contract. The goal is to achieve a balance between production costs and operating and support costs in order to obtain the lowest overall life cycle costs.

The objective of this contract is to develop an engine that will power the Abrams Tank and Crusader and meet the System Specifications. During the common engine development effort, the contractor shall continually strive to reduce the production unit costs of the engine and the operation and support cost of the engine after fielding. The DTURC goal for the first production lot is \$\_\_\_\_\_. The DTURC goal for the entire estimated production buy of 3,600 engines (2,845 Abrams and 755 Crusaders) is \$\_\_\_\_\_. The DTURC includes the contractor's recurring hardware production costs. Cost elements should include; labor, material, purchased parts, subcontract cost, burden, G&A, and profit. The DTURC is based on approximately \_

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\_\_\_\_\_ engines per year. The DTURC is in fiscal year 2003 dollars and uses the Office of Management and Budget (OMB) inflation guidance for Weapon Track Combat Vehicles (WTCV) dated 03 Jan 2000. The DTURC needs to track with the first production lot.

The DTOSC goal is \$ \_\_\_\_\_per hour, and includes repair parts costs and petroleum oil and lubricants. The DTOSC is based on the following factors: \_\_\_\_\_. The DTOSC is in fiscal year 2003 dollars and uses the OMB inflation guidance for Operations and Maintenance (OMA), dated 03 Jan 2000.

A DTURC and DTOSC report will be provided by the contractor on a quarterly basis. The cost report will be a means by which the Government will track and evaluate the contractor's progress toward achieving their DTURC and DTOSC goals. The contractor will document the rational for any variances from the goals and will take actions to rectify any variances not beneficial to the Government. The award fee in H-25.2.2 1. will be tied to how well the contractor demonstrates their progress towards and the achievement of the DTURC and the DTOSC goals. Final determination of the achievement of the DTURC goal will be made with the submission of the contractor's first production proposal. Development test results will be used to evaluate the achievement of the DTOSC.

Nothing herein shall be construed as obligating the government to award any production contract.

**H-25 AWARD FEE PROVISION**

**1. General Instructions**

(a) The award fee provisions contained herein, and the administration of these provisions by the Government are not subject to the Dispute Clause of this contract.

(b) An Award Fee Review Board (AFRB) will be appointed to evaluate performance and determine the amount of award fee earned. Such evaluation board will consist of technical experts from the Abrams and Crusader Program Management office, possible User Representative participation and the Contracting Officer. The evaluation performed by the Board and the resulting award fee amount shall be reviewed and approved by the Fee Determining Official (FDO) 30 days after end of review period.

(c) It is the intent of the Government to conduct an evaluation to determine the amount of any award fee earned, on a semi-annual basis in accordance with the review periods listed below. The Procuring Contracting Officer (PCO) intends to provide the contractor the award fee criteria for each period prior to the start of the review period. To achieve the maximum impact of the award fee pool, the contractor will be given an opportunity to assess that criteria and its priority or importance and provide input to the Government for consideration. In the event that mutual agreement is unobtainable, the Government retains the right to unilaterally adopt the criteria to be used during that review period. The Government reserves the right to unilaterally change the award fee evaluation criteria, period duration, distribution of remaining award fee dollars, and other matters covered in this plan, by written notice from the PCO to the contractor prior to the start of any review period. Changes to the plan for the current period will be subject to mutual agreement between the Government and the contractor.

**H-25.1 REVIEW PERIODS**

Review Period	Percentage Applied	Award Amount Available
#1 Award - 30 Nov 2000	10%	10% X Award Fee
#2 01 Dec 00 - 31 May 2001	15%	15% X Award Fee
#3 01 Jun 01 - 30 Nov 2001	15%	15% X Award Fee
#4 01 Dec 01 - 31 May 2002	20%	20% X Award Fee
#5 01 Jun 02 - 30 Nov 2002	20%	20% X Award Fee
#6 01 Dec 02 - Completion	20%	20% X Award Fee

(a) Unearned award fee from one period may be rolled forward to the immediate following period against specific areas of emphasis at the discretion of the Government. The areas of emphasis will be specifically included in the determination of the award fee criteria. The criteria of H.25.1 (d) additionally apply to any and all roll over award fee amounts.

(b) At such time as the FDO should determine, a summary of the Government's evaluation of the contractor's performance for a given period, utilizing the evaluation criteria contained herein, may be released and discussed with the contractor. The contractor may request, and the Government will provide, a formal debriefing on the AFRB's findings.

(c) The contractor may present a presentation (similar to IPR format) formally to the AFRB and other Government participants, which shall not exceed 120 minutes in length. If determined appropriate by the Contractor and/or the Government, this presentation shall include both the Contractor's and Government's perspective on performance during the evaluation period. The contractor may submit proposed criteria, through the PCO, within the area of emphasis, as well as other plan changes for the next period of performance.

(d) When it is determined that an award fee is applicable, any such amount shall be incorporated by contract modification.

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No award fee will be paid for any award fee review period in which the contractor receives an overall rating of marginal based on a weighted average of the four objectives, i.e. less than 30%.

(I) Nothing in this clause H.24 shall affect the payment of the base fee (3%). The Government shall make payments on account of the base fee equal to 3% of the amount of each invoice submitted by the Contractor and payable pursuant to the contract clause entitled "ALLOWABLE COST AND PAYMENT" (apr/1998) FAR 52.216-7.

H-25.2 AWARD FEE AREAS OF EMPHASIS AND CRITERIA

H-25.2.1 Program Objectives and Relative Weights:

<u>Objective</u>	<u>Relative Weight</u>
1. DTURC and DTOSC	30% of Award Fee
2. Crusader Weight	30% of Award Fee
3. Development Contract Cost Control and Management utilizing the Earned Value Management System	20% of Award Fee
4. Commonality	20% of Award Fee

H25.2.2 Criteria for Critical Contract Requirements:

1. DTURC and DTOSC - 30% of Award Fee

The contractor shall implement Cost as an Independent Variable (CAIV) in managing/minimizing development, production, operating and support costs. The contractor shall manage to the DTURC and DTOSC throughout development by tracking its progress against the goals and planned activities for achieving these goals. DTURC and DTOSC are key design parameters, which need to be addressed on a continual basis throughout the contract. The goal for Abrams is to achieve a significant net savings in Operating and Support Costs over the current AGT 1500 engine.

Exceptional: 71-100%

The Contractor has clearly demonstrated a commitment to achieving the established goals. Specific and tangible results have emanated from its management processes. There are numerous examples where design and management decisions have been significantly influenced by the desire to achieve the goals. The contractor has demonstrated that it is tracking with its goals and planned activities to achieve the goals. There are no examples where significant decisions have been made without due consideration of the importance these goals.

Satisfactory: 30-70%

The Contractor has demonstrated a commitment to achieving the established goals. To some degree, tangible results have emanated from its management processes. While there are some specific examples where design and management decisions have been significantly influenced by the desire to achieve the goals, the majority of the results are somewhat intangible. There are some examples that the contractor is tracking with its goals and planned activities to achieve the goals, but overall, the results are inconclusive. There are few, if any, examples where significant decisions have been made without due consideration of the importance of these goals.

Marginal: 0-29%

The Contractor has a commitment to achieving the established goals but this has not yet been demonstrated by tangible results. There are few specific examples where design and management decisions have been significantly influenced by the desire to achieve the goals. Reported and observed results are nearly all intangible (i.e., theoretical, indefinite or vague). There are some examples that the contractor is tracking with its goals and planned activities and may achieve the goals, but overall, the results are immaterial. There are few examples where significant decisions have been made without due consideration of the importance of these goals.

2. Crusader Weight - 30% of Award Fee

This singularly is crucial to the Crusader program. The maximum permissible weight for an engine must not exceed the threshold of (TBD) tons, however it must be stressed that the desired design goal is (TBD) tons. It is preferential to have a fielded vehicle with a weight below any initial estimates. The ability to devise and implement weight reductions and the objective weight estimate will form the basis of the award fee.

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Exceptional: 71-100%

A design to achieve less than the desired weight goal of (TBD) is developed, while maintaining a favorable balance between cost, schedule and performance. The data submitted clearly indicates that a weight less than the desired weight goal will be achieved.

Satisfactory: 30-70%

A design to achieve the desired weight of (TBD) is developed, while maintaining a favorable balance between cost, schedule and performance. The data submitted clearly indicates that the desired weight will be achieved and evidence indicates progress towards achieving less than the desired weight goal exists.

Marginal: 0-29%

A design to achieve the threshold weight of (TBD) is developed, while maintaining a favorable balance between cost, schedule and performance. The data submitted clearly indicates that the threshold weight will be achieved and evidence indicates progress towards achieving the desired weight goal exists.

### 3. Development Contract Cost Control and Management utilizing the Earned Value Management System (EVMS) - 20% of Award Fee

The EVMS shall be used as a tool to control the development cost, schedule and manage the effort. A Performance Measurement Baseline (PMB) will be used in conjunction with the EVMS. EVMS will be used to identify key program drivers to include providing an explanation as to the extent/cause of any problem areas. PMB will focus on detailed activity relationships, resourcing and its ability to accurately show the status of the program. Assessing earned value status will consist of determining whether BCWP accurately reflects work accomplished relative to the performance metrics inherent to the PMB. In addition, the timeliness and effectiveness corrective actions will be assessed, The EVMS should provide information indicating if the contract is on schedule and within the planned cost.

Exceptional: 71-100%

The contract is at or ahead of schedule and under planned cost for the work performed based on the information provided by the EVMS. There are no examples where significant management decisions have been made without due consideration of the impact on cost and schedule. BCWP accurately reflects performance according to metrics.

Satisfactory: 30-70%

The contract is on schedule and at planned cost for the work performed based on the information provided by the EVMS. There are few, if any, examples where significant management decisions have been made without due consideration of the impact on cost and schedule. BCWP reflects performance according to the metrics with minimal problems developing adequate metrics for work packages identified during planning.

Marginal: 0-29%

The contract is behind schedule and over planned cost for the work performed based on the information provided by the EVMS. BCWP reflects performance below the metric. Corrective actions are being implemented, with minimal assessment for timeliness and/or effectiveness. As detailed planning takes place, adequate metrics used for measuring performance are generally being developed.

### 4. Commonality - 20% of Award Fee

This is especially crucial to the Abrams Crusader Common Engine (ACCE) program. The Army is seeking a new Abrams Tank propulsion system and a Crusader Artillery System power pack that employ, at a minimum, a common engine. Although, commonality in manufacturing offers desirable economies, the primary goal of commonality is to reduce maintenance and support burdens of our Soldiers in the field and to reduce integration risk. It is desired that the Common Engine provides maximum benefit to the soldier in the field and the ability to achieve the desired commonality will be the basis of the award fee.

Exceptional: 71-100%

An exceptional rating is based upon the extent to which: (1) the contractor maintains the agreed upon design for a common Engine "B-Kit" that is completely interchangeable with Abrams and Crusader and capable of being installed and operated in both vehicles and (2) the data submitted clearly indicates progress towards a substantial reduction in the size and quantity of items in the agreed upon unique "Abrams and Crusader A-Kits- (attaching or interfacing hardware)". Any additional items that move from the A-kit to the B-Kit will result in a significant reduction in maintenance and support burdens of the Soldiers in the field and reduce integration risk

Satisfactory: 30-70%

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A satisfactory rating is based upon the extent to which: (1) the contractor maintains the agreed upon design for a common Engine "B-Kit" that is completely interchangeable with Abrams and Crusader and capable of being installed and operated in both vehicles and (2) the data submitted clearly indicates progress towards reducing the size and quantity of items in the agreed upon unique "Abrams and Crusader A-Kits- (attaching or interfacing hardware)". Any additional items that move from the A-kit to the B-Kit will result in some reduction in maintenance and support burdens of the Soldiers in the field and reduce integration risk

Marginal: 0-29%

A marginal rating is based upon the extent to which the contractor maintains the agreed upon design for a common Engine "B-Kit" that is completely interchangeable with Abrams and Crusader and capable of being installed and operated in both vehicles using a unique "Abrams and Crusader A-Kits- (attaching or interfacing hardware)".

\*\*\* END OF NARRATIVE H001 \*\*\*

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SECTION I - CONTRACT CLAUSES

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: <http://farsite.hill.af.mil/>  
(End of clause)

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
I-1	52.202-1	DEFINITIONS	OCT/1995
I-2	52.203-3	GRATUITIES	APR/1984
I-3	52.203-5	COVENANT AGAINST CONTINGENT FEES	APR/1984
I-4	52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT	JUL/1995
I-5	52.203-7	ANTI-KICKBACK PROCEDURES	JUL/1995
I-6	52.203-8	CANCELLATION, RESCISSION AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-7	52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY	JAN/1997
I-8	52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS	JUN/1997
I-9	52.204-2	SECURITY REQUIREMENTS	AUG/1996
I-10	52.204-4	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER	JUN/1996
I-11	52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT	JUL/1995
I-12	52.211-5	MATERIAL REQUIREMENTS	OCT/1997
I-13	52.211-15	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS	SEP/1990
I-14	52.215-2	AUDIT AND RECORDS - NEGOTIATIONS	JUN/1999
I-15	52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT	OCT/1997
I-16	52.215-9	CHANGES OR ADDITIONS TO MAKE-OR-BUY PROGRAM (ALTERNATE II (1997 OCT))	OCT/1997
I-17	52.215-11	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS	OCT/1997
I-18	52.215-13	SUBCONTRACTOR COST OR PRICING DATA -- MODIFICATIONS	OCT/1997
I-19	52.216-7	ALLOWABLE COST AND PAYMENT	APR/1998
I-20	52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS	OCT/1999
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I-24	52.222-20	WALSH-HEALEY PUBLIC CONTRACTS ACT	DEC/1996
I-25	52.222-26	EQUAL OPPORTUNITY	FEB/1999
I-26	52.222-28	EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS	APR/1984
I-27	52.222-35	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA	APR/1998
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I-30	52.223-3	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA	JAN/1997
I-31	52.223-5	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION	APR/1998
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I-38	52.227-1	AUTHORIZATION AND CONSENT (ALTERNATE I (JUL 1995))	APR/1984
I-39	52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT	AUG/1996
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I-41	52.227-10	FILING OF PATENT APPLICATIONS--CLASSIFIED SUBJECT MATTER	APR/1984
I-42	52.227-12	PATENT RIGHTS--RETENTION BY THE CONTRACTOR (LONG FORM)	JAN/1997
I-43	52.228-7	INSURANCE--LIABILITY TO THIRD PERSONS	MAR/1996
I-44	52.230-2	COST ACCOUNTING STANDARDS	APR/1998
I-45	52.230-3	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES this clause applies only when the Contractor has been determined eligible. See Section K.	APR/1998
I-46	52.230-6	ADMINISTRATION OF COST ACCOUNTING STANDARDS	NOV/1999
I-47	52.232-9	LIMITATION ON WITHHOLDING OF PAYMENTS	APR/1984
I-48	52.232-17	INTEREST	JUN/1996
I-49	52.232-22	LIMITATION OF FUNDS	APR/1984
I-50	52.232-23	ASSIGNMENT OF CLAIMS	JAN/1986

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I-51	52.232-25	PROMPT PAYMENT	JUN/1997
I-52	52.232-33	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION	MAY/1999
I-53	52.233-1	DISPUTES	DEC/1998
I-54	52.233-3	PROTEST AFTER AWARD -- (ALTERNATE I, dated JUN 1985)	AUG/1996
I-55	52.242-1	NOTICE OF INTENT TO DISALLOW COSTS	APR/1984
I-56	52.242-2	PRODUCTION PROGRESS REPORTS	APR/1991
I-57	52.242-3	PENALTIES FOR UNALLOWABLE COSTS	OCT/1995
I-58	52.242-4	CERTIFICATION OF INDIRECT COSTS	JAN/1997
I-59	52.242-10	F.O.B. ORIGIN--GOVERNMENT BILLS OF LADING OR PREPAID POSTAGE	APR/1984
I-60	52.242-12	REPORT OF SHIPMENT (REPSHIP)	JUL/1995
I-61	52.242-13	BANKRUPTCY	JUL/1995
I-62	52.243-2	CHANGES--COST-REIMBURSEMENT (ALTERNATE V (APR 1984))	AUG/1987
I-63	52.243-6	CHANGE ORDER ACCOUNTING	APR/1984
I-64	52.243-7	NOTIFICATION OF CHANGES	APR/1984
I-65	52.244-2	SUBCONTRACTS (ALT I--AUG 1998)	AUG/1998
I-66	52.244-5	COMPETITION IN SUBCONTRACTING	DEC/1996
I-67	52.245-5	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (Deviation, per DAR Tracking Number 99-00008, 13 July 99)	JAN/1986
I-68	52.245-18	SPECIAL TEST EQUIPMENT	FEB/1993
I-69	52.245-19	GOVERNMENT PROPERTY FURNISHED AS-IS	APR/1984
I-70	52.246-24	LIMITATION OF LIABILITY--HIGH-VALUE ITEMS	FEB/1997
I-71	52.247-1	COMMERCIAL BILL OF LADING NOTATIONS the notation set forth in paragraph (a) of the clause applies in this contract.' The agency name in line one of the notation shall read:US ARMY TANK-AUTOMOTIVE & ARMAMENTS COMMAND	APR/1984
I-72	52.249-6	TERMINATION (COST-REIMBURSEMENT)	SEP/1996
I-73	52.249-14	EXCUSABLE DELAYS	APR/1984
I-74	52.251-1	GOVERNMENT SUPPLY SOURCES	APR/1984
I-75	52.253-1	COMPUTER GENERATED FORMS	JAN/1991
I-76	252.203-7001	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE CONTRACT-RELATED FELONIES	MAR/1999
I-77	252.204-7003	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT	APR/1992
I-78	252.209-7000	ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY	NOV/1995
I-79	252.209-7004	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98	MAR/1998
I-80	252.211-7005	SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS	MAR/1999
I-81	252.215-7000	PRICING ADJUSTMENTS	DEC/1991
I-82	252.215-7002	COST ESTIMATING SYSTEM REQUIREMENTS	OCT/1998
I-83	252.219-7003	SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS)	APR/1996
I-84	252.223-7004	DRUG-FREE WORK FORCE	SEP/1988
I-85	252.225-7012	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES	MAY/1999
I-86	252.225-7014	PREFERENCE FOR DOMESTIC SPECIALTY METALS (ALT 1)	MAR/1998
I-87	252.225-7016	RESTRICTION ON ACQUISITION OF BALL AND ROLLER BEARINGS	AUG/1998
I-88	252.225-7017	PROHIBITION ON AWARD TO COMPANIES OWNED BY THE PEOPLE'S REPUBLIC OF CHINA	FEB/2000
I-89	252.225-7022	RESTRICTION ON ACQUISITION OF POLYACRYLONITRILE (PAN) CARBON FIBER	JUN/1997
I-90	252.225-7025	RESTRICTION ON ACQUISITION OF FORGINGS	JUN/1997
I-91	252.225-7026	REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES	MAR/1998
I-92	252.225-7030	RESTRICTION ON ACQUISITION OF CARBON, ALLOY, AND ARMOR STEEL PLATE	OCT/1992
I-93	252.225-7031	SECONDARY ARAB BOYCOTT OF ISRAEL	JUN/1992
I-94	252.227-7013	RIGHTS IN TECHNICAL DATA --NONCOMMERCIAL ITEMS	NOV/1995
I-95	252.227-7014	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION	JUN/1995
I-96	252.227-7016	RIGHTS IN BID OR PROPOSAL INFORMATION	JUN/1995
I-97	252.227-7020	RIGHTS IN SPECIAL WORKS	JUN/1995
I-98	252.227-7025	LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGENDS	JUN/1995
I-99	252.227-7026	DEFERRED DELIVERY OF TECHNICAL DATA OR COMPUTER SOFTWARE	APR/1988



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I-100	252.227-7027	DEFERRED ORDERING OF TECHNICAL DATA OR COMPUTER SOFTWARE	APR/1988
I-101	252.227-7030	TECHNICAL DATA--WITHHOLDING OF PAYMENT	OCT/1988
I-102	252.242-7000	POSTAWARD CONFERENCE	DEC/1991
I-103	252.242-7003	APPLICATION FOR U.S. GOVERNMENT SHIPPING DOCUMENTATION/INSTRUCTIONS	DEC/1991
I-104	252.242-7005	COST/SCHEDULE STATUS REPORT	MAR/1998
I-105	252.244-7000	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DoD CONTRACTS)	FEB/1997

I-106	52.215-21	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS `` (ALTERNATE III (OCT 1997))	OCT/1997
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(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts of subcontracts for commercial items.

(A) If--

(1) the original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition, or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item, and

(2) the modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price or recent sales in quantities similar to the proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(4) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR

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15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(c) Submit the cost portion of the proposal via the following electronic media: Electronic Spreadsheet files compatible with Excel 5.0 or earlier.

(End of clause)

I-107                      52.222-2                      PAYMENT FOR OVERTIME PREMIUMS                      JUL/1990

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed the amount negotiated or the overtime premium is paid for work--

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdown of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

(End of clause)

I-108                      52.223-7                      NOTICE OF RADIOACTIVE MATERIALS                      JAN/1997

(a) The Contractor shall notify the Contracting Officer or designee, in writing 20 days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in Title 10 of the Code of Federal Regulations, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items which contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior contracts the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall--

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted.

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and all containers in which such items, parts or subassemblies are delivered to the Government shall be clearly marked and labeled as required by the latest revision of MIL-STD 129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

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(End of clause)

  

I-109                      52.225-10                      DUTY-FREE ENTRY                      APR/1984

(a) Except as otherwise approved by the Contracting Officer, no amount is or will be included in the contract price for any duties on supplies specifically identified in the Schedule to be accorded duty-free entry.

(b) Except for supplies listed in the Schedule to be accorded duty-free entry, and except as provided under any other clause of this contract or in paragraph (c) below, the following procedures apply:

(1) The Contractor shall notify the Contracting Officer in writing of any purchase of foreign supplies (including, without limitation, raw materials, components, and intermediate assemblies) in excess of\_\_\_\_\_ that are to be imported into the customs territory of the United States for delivery to the Government or for incorporation into end items to be delivered under this contract. The notice shall be furnished to the Contracting Officer at least 20 days before the importation and shall identify (i) the foreign supplies, (ii) the estimated amount of duty, and (iii) the country of origin.

(2) If the Contracting Officer determines that these supplies should be entered duty-free, the Contracting Officer shall notify the Contractor within ten days.

(3) Except as otherwise approved by the Contracting Officer, the contract price shall be reduced by (or the allowable cost shall not include) the amount of duty that would be payable if the supplies were not entered duty-free.

(c) Paragraph (b) above shall not apply to purchases of foreign supplies if (1) they are identical in nature with items purchased by the Contractor or any subcontractor in connection with its commercial business and (2) segregation of these supplies to ensure use only on Government contracts containing duty-free entry provisions is not economical or feasible.

(d) The Contractor warrants that all supplies for which duty-free entry is to be claimed are intended to be delivered to the Government or incorporated into the end items to be delivered under this contract, and that duty shall be paid to the extent that these supplies, or any portion of them, are diverted to non-Governmental use, other than as scrap or salvage or as a result of a competitive sale authorized by the Contracting Officer.

(e) The Government agrees to execute any required duty-free entry certificates for items specified in this contract or approved by the Contracting Officer and to assist the Contractor in obtaining duty-free entry of the supplies.

(f) All shipping documents covering the supplies to be entered duty-free shall consign the shipments to the contracting agency in care of the Contractor and shall include the delivery address of the Contractor (or contracting agency, if appropriate). The documents shall bear the following information:

(1) Government prime contract number.

(2) Identification of carrier.

(3) The notation UNITED STATES GOVERNMENT, US ARMY TANK-AUTOMOTIVE AND ARMAMENTS COMMAND, Duty-free entry to be claimed pursuant to Item No(s)(from Tariff Schedules), Tariff Schedules of the United States (19 U.S.C. 1202). Upon arrival of shipment at port of entry, District Director of Customs, please release shipment under 19 CFR 142 and notify (cognizant contract administration office) for execution of Customs Forms 7501 and 7501-A and any required duty-free entry certificates.

(4) Gross weight in pounds (if freight is based on space tonnage, state cubic feet in addition to gross shipping weight).

(5) Estimated value in United States dollars.

(g) The Contractor agrees to instruct the foreign supplier to consign the shipment as specified in (f) above, to mark all packages with the words UNITED STATES GOVERNMENT, and the title of the contracting agency, and to accompany the shipment with at least two copies of the bill of lading (or other shipping document) for use by the District Director of Customs at the port of entry.

(h) The Contractor agrees to notify in writing the cognizant contract administration office immediately upon notification from the Contracting Officer that duty-free entry will be accorded (or, if the duty-free supplies were listed in the contract Schedule, upon award by the Contractor to the overseas supplier). The notice shall identify (1) the foreign supplies, (2) the country of origin, (3) the contract number, and (4) the scheduled delivery date(s).

(i) The Contractor agrees to insert the substance of this clause in any subcontract under which--

(1) There will be imported into the customs territory of the United States supplies identified in the Schedule as supplies to be accorded duty-free entry; or

(2) Other foreign supplies in excess of -2- may be imported into the customs territory of the United States.

(End of clause)

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I-110      52.208-8      HELIUM REQUIREMENT FORECAST AND REQUIRED SOURCES FOR HELIUM (JUN 1997)      JUN/1997

(a) Definitions. Bureau helium distributor means a private helium distributor which has established and maintains eligibility to distribute helium purchased from the Bureau of Mines, as specified in 30 CFR 602. Bureau of Mines, as used in this clause, means the Department of the Interior, Bureau of Mines, Helium Field Operations, located at 801 south Fillmore Street, Amarillo, TX 79101-3545. Helium requirement forecast means an estimate by the Contractor or subcontractor of the amount of helium required for performance of the contract or subcontract. Major helium requirement means a helium requirement during a calendar month of 5,000 or more standard cubic feed (measured at 14.7 pound per square inch absolute pressure and 70 degrees Fahrenheit temperature), including liquid helium gas or equivalent. In any month in which the major requirement threshold is met, all helium purchased during that month is considered part of the major helium requirement.

(b) Requirements

(1) Helium Requirement Forecast. The Contractor shall provide to the Contracting Officer a helium requirement forecast, point of contact, and telephone number within ten days of award.

(2) Sources of Helium. Except for helium acquired by the Contractor before the award of this contract, and to the extent that supplies are readily available, the Contractor shall purchase all major requirements of helium from--

(i) The Department of the Interior's Bureau of Mines:

(ii) A Bureau helium distributor (a copy of the "List by Shipping Points of Private Distributors Eligible to Sell Helium to Federal Agencies" may be obtained from the Bureau of Mines); or

(iii) A General Services Administration Federal Supply Schedule contract, if use is authorized by the Contracting Officer (see Subpart 51.1);

(3) Promptly upon award of any subcontract or order that involves a major helium requirement, the Contractor shall provide to the Bureau of Mines, and to the Contracting Officer, written notification that includes:

(i) The prime contract number;

(ii) the name, address and telephone number of the subcontractor, including a point of contact; and

(iii) A copy of the subcontractor's helium requirement forecast.

(c) Subcontracts.

(1) The Contractor shall insert this clause, including this paragraph (c), in any subcontract or order that involves furnishing of a major helium requirement.

(2) When a subcontract involves a major helium requirement, the following statement shall be included: Helium furnished under this contract or order shall be helium that has been purchased from the Bureau of Mines, or a a listed Bureau helium distributor.

(End of clause)

I-111      52.223-9      CERTIFICATION AND ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL      OCT/1997  
CONTENT FOR EPA DESIGNATED ITEMS

(a) As required by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. 6962(j)(2)(C)), the Contractor shall execute the following certification:

CERTIFICATION

I, \_\_\_\_\_ (name of certifier), am an officer or employee responsible for the performance of this contract and hereby certify that the percentage of recovered material content for EPA Designated Items was at least the amount required by the applicable contract specifications.

\_\_\_\_\_  
Signature of the Officer or Employee

\_\_\_\_\_  
Typed Name of the Officer or Employee

Name of Offeror or Contractor:

Title

Name of Company, Firm, or Organization

Date

(End of certification)

(b) The Contractor also shall estimate the percentage of recovered materials actually used in the performance of this contract. The estimate is in addition to the certification in paragraph (a) of this clause.

ESTIMATE

		PERCENTAGE OF RECOVERED MATERIAL CONTENT*
EPA DESIGNATED ITEM	TOTAL DOLLAR VALUE OF EPA DESIGNATED ITEM	

\*Where applicable, also include the percentage of postconsumer material content.

(c) The Contractor shall submit this certification and estimate upon completion of the contract to the Procuring Contracting Officer (PCO) identified on the face page of this contract.

(End of clause)

I-11252.223-11OZONE-DEPLETING SUBSTANCESJUN/1996

(a) Definition

Ozone-depleting substance, as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j(b), (c), and (d) and 40 CFR Part 82, Subpart E, as follows:

WARNING: Contains (or manufactured with, if applicable) \_\_\_\_\_ \* \_\_\_\_\_, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere.

\*The Contractor shall insert the name of the substance(s).

(End of clause)

I-11352.227-13PATENT RIGHTS--ACQUISITION BY THE GOVERNMENT (ALTERNATE II)JUN/1989

(a) Definitions.

Invention, as used in this clause, means any invention or discovery which is or may be patentable or otherwise protectable under title 35 of the United States Code or any novel variety of plant that is or may be protectable under the Plant Variety Protection Act (7 U.S.C. 2321, et seq.).

Practical application, as used in this clause, means to manufacture, in the case of a composition or product; to practice, in the case of a process or method; or to operate, in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are, to the extent permitted by law or Government regulations, available to the public on reasonable terms.

Subject invention, as used in this clause, means any invention of the Contractor conceived or first actually reduced to

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practice in the performance of work under this contract; provided, that in the case of a variety of plant, the date of determination (as defined in section 41(d) of the Plant Variety Protection Act, 7 U.S.C. 2401(d)) must also occur during the period of contract performance.

(b) Allocations of principal rights.

(1) Assignment to the Government. The Contractor agrees to assign to the Government the entire right, title, and interest throughout the world in and to each invention, except to the extent that rights are retained by the Contractor under subparagraph (b)(2) and paragraph (d) below.

(2) Greater rights determinations.

(i) The Contractor, or an employee-inventor after consultation with the Contractor, may retain greater rights than the nonexclusive license provided in paragraph (d) below, in accordance with the procedures of paragraph 27.304-1(a) of the Federal Acquisition Regulation (FAR). A request for a determination of whether the Contractor or the employee-inventor is entitled to retain such greater rights must be submitted to the Head of the Contracting Agency or designee at the time of the first disclosure of the invention pursuant to subparagraph (e)(2) below, or not later than eight months thereafter, unless a longer period is authorized in writing by the Contracting Officer for good cause shown in writing by the Contractor. Each determination of greater rights under this contract normally shall be subject to paragraph (c) below, and to the reservations and conditions deemed to be appropriate by the Head of the Contracting Agency or designee.

(ii) Upon request, the Contractor shall provide the filing date, serial number and title, a copy of the patent application (including an English-language version if filed in a language other than English), and patent number and issue date for any subject invention in any country for which the Contractor has retained title.

(iii) Upon request, the Contractor shall furnish the Government an irrevocable power to inspect and make copies of the patent application file.

(c) Minimum rights acquired by the Government.

(1) With respect to each subject invention to which the Contractor retains principal or exclusive rights, the Contractor agrees as follows:

(i) The Contractor hereby grants to the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced each subject invention throughout the world by or on behalf of the Government of the United States (including any Government agency). The agency reserves the right to unilaterally amend this contract to identify specific treaties or international agreements entered into or to be entered into by the Government after the effective date of this contract, and effectuate those license or other rights which are necessary for the Government to meet its obligations to foreign governments, their nationals, and international organizations under such treaties or international agreements with respect to subject inventions made after the date of the amendment.

(ii) The Contractor agrees that with respect to any subject invention in which it has acquired title, the Federal agency has the right in accordance with the procedures in FAR 27.304-1(g) to require the Contractor, an assignee, or exclusive licensee of a subject invention to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances, and if the Contractor, assignee, or exclusive licensee refuses such a request, the Federal agency has the right to grant such a license itself if the Federal agency determines that--

(A) Such action is necessary because the Contractor or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;

(B) Such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the Contractor, assignee, or their licensees;

(C) Such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the Contractor, assignee, or licensees; or

(D) Such action is necessary because the agreement required by paragraph (i) of this clause has neither been obtained nor waived or because a licensee of the exclusive right to use or sell any subject invention in the United States is in breach of such agreement.

(iii) The Contractor agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization of a subject invention that are being made by the Contractor or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the Contractor, and such other data and information as the agency may

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reasonably specify. The Contractor also agrees to provide additional reports as may be requested by the agency in connection with any march-in proceedings undertaken by the agency in accordance with subdivision (ii) above. To the extent data or information supplied under this section is considered by the Contractor, its licensee or assignee to be privileged and confidential and is so marked, the agency agrees that, to the extent permitted by law, it will not disclose such information to persons outside the Government.

(iv) The Contractor agrees, when licensing a subject invention, to arrange to avoid royalty charges on acquisitions involving Government funds, including funds derived through a Military Assistance Program of the Government or otherwise derived through the Government, to refund any amounts received as royalty charges on a subject invention in acquisitions for, or on behalf of, the Government, and to provide for such refund in any instrument transferring rights in the invention to any party.

(v) The Contractor agrees to provide for the Government's paid-up license pursuant to subdivision (i) above in any instrument transferring rights in a subject invention and to provide for the granting of licenses as required by subdivision (ii) above, and for the reporting of utilization information as required by subdivision (iii) above, whenever the instrument transfers principal or exclusive rights in a subject invention.

(2) Nothing contained in this paragraph (c) shall be deemed to grant to the Government any rights with respect to any invention other than a subject invention.

(d) Minimum rights to the Contractor.

(1) The Contractor is hereby granted a revocable nonexclusive, royalty-free license in each patent application filed in any country on a subject invention and any resulting patent in which the Government obtains title, unless the Contractor fails to disclose the subject invention within the times specified in subparagraph (e)(2) below. The Contractor's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the Contractor is a part and includes the right to grant sublicenses of the same scope to the extent the Contractor was legally obligated to do so at the time the contract was awarded. The license is transferable only with the approval of the funding Federal agency except when transferred to the successor of that part of the Contractor's business to which the invention pertains.

(2) The Contractor's domestic license may be revoked or modified by the funding Federal agency to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions in 37 CFR Part 404 and agency licensing regulations. This license will not be revoked in that field of use or the geographical areas in which the Contractor has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at the discretion of the funding Federal agency to the extent the Contractor, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.

(3) Before revocation or modification of the license, the funding Federal agency will furnish the Contractor a written notice of its intention to revoke or modify the license, and the Contractor will be allowed 30 days (or such other time as may be authorized by the funding Federal agency for good cause shown by the Contractor) after the notice to show cause why the license should not be revoked or modified. The Contractor has the right to appeal, in accordance with applicable agency licensing regulations and 37 CFR 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(4) When the Government has the right to receive title, and does not elect to secure a patent in a foreign country, the Contractor may elect to retain such rights in any foreign country in which the Government elects not to secure a patent, subject to the Government's rights in subparagraph (c)(1) of this clause.

(e) Invention identification, disclosures, and reports.

(1) The Contractor shall establish and maintain active and effective procedures to ensure that subject inventions are promptly identified and disclosed to Contractor personnel responsible for patent matters within six months of conception and/or first actual reduction to practice, whichever occurs first in the performance of work under this contract. These procedures shall include the maintenance of laboratory notebooks or equivalent records and other records as are reasonably necessary to document the conception and/or the first actual reduction to practice of subject inventions, and records that show that the procedures for identifying and disclosing the inventions are followed.

Upon request, the Contractor shall furnish the Contracting Officer a description of such procedures for evaluation and for determining as to their effectiveness.

(2) The Contractor shall disclose each subject invention to the Contracting Officer within two months after the inventor discloses it in writing to Contractor personnel responsible for patent matters or, if earlier, within six months after the Contractor becomes aware that a subject invention has been made, but in any event before any on sale, public use, or publication of such invention known to Contractor. The disclosure to the agency shall be in the form of a written report and

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shall identify the contract under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding, to the extent known at the time of the disclosure, of the nature, purpose, operation, and physical, chemical, biological, or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale, or public use of the invention and whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication at the time of disclosure. In addition, after disclosure to the agency, the Contractor shall promptly notify the agency of the acceptance of any manuscript describing the invention for publication or of any on sale or public use planned by the Contractor.

(3) The Contractor shall furnish the Contracting Officer the following:

(i) Interim reports every 12 months (or such longer period as may be specified by the Contracting Officer) from the date of the contract, listing subject inventions during that period, and stating that all subject inventions have been disclosed (or that there are not such inventions) and that the procedures required by subparagraph (e)(1) above have been followed.

(ii) A final report, within three months after completion of the contracted work, listing all subject inventions or stating that there were no such inventions, and listing all subcontracts at any tier containing a patent rights clause or stating that there were no such subcontracts.

(4) The Contractor agrees to require, by written agreement, its employees, other than clerical and nontechnical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the Contractor each subject invention made under contract in order that the Contractor can comply with the disclosure provisions of paragraph (c) above, and to execute all papers necessary to file patent applications on subject inventions and to establish the Government's rights in the subject inventions. This disclosure format should require, as a minimum, the information required by subparagraph(2) above.

(5) The Contractor agrees subject to FAR 27.302(i) that the Government may duplicate and disclose subject invention disclosures and all other reports and papers furnished or required to be furnished pursuant to this clause.

(f) Examination of records relating to inventions.

(1) The Contracting Officer or any authorized representative shall, until three years after final payment under this contract, have the right to examine any books (including laboratory notebooks), records, and documents of the Contractor relating to the conception or first actual reduction to practice of inventions in the same field of technology as the work under this contract to determine whether--

(i) Any such inventions are subject inventions;

(ii) The Contractor has established and maintains the procedures required by subparagraphs (e)(1) and (4) of this clause; and

(iii) The Contractor and its inventors have complied with the procedures.

(2) If the Contracting Officer learns of an unreported Contractor invention which the Contracting Officer believes may be a subject invention, the Contractor may be required to disclose the invention to the agency for a determination of ownership rights.

(3) Any examination of records under this paragraph will be subject to appropriate conditions to protect the confidentiality of the information involved.

(g) Withholding of payment (this paragraph does not apply to subcontracts).

(1) Any time before final payment under this contract, the Contracting Officer may, in the Government's interest, withhold payment until a reserve not exceeding \$50,000 or 5 percent of the amount of this contract, whichever is less, shall have been set aside if, in the Contracting Officer's opinion, the Contractor fails to--

(i) Establish, maintain, and follow effective procedures for identifying and disclosing subject inventions pursuant to subparagraph (e)(1) above;

(ii) Disclose any subject invention pursuant to subparagraph (e)(2) above;

(iii) Deliver acceptable interim reports pursuant to subdivision (e)(3)(i) above; or

(iv) Provide the information regarding subcontracts pursuant to subparagraph (h)(4) below.



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(2) Such reserve or balance shall be withheld until the Contracting Officer has determined that the Contractor has rectified whatever deficiencies exist and has delivered all reports, disclosures, and other information required by this clause.

(3) Final payment under this contract shall not be made before the Contractor delivers to the Contracting Officer all disclosures of subject inventions required by subparagraph (e)(2) above, an acceptable final report pursuant to subdivision (e)(3)(ii) above, and all past due confirmatory instruments.

(4) The Contracting Officer may decrease or increase the sums withheld up to the maximum authorized above. No amount shall be withheld under this paragraph while the amount specified by this paragraph is being withheld under other provisions of the contract. The withholding of any amount or the subsequent payment thereof shall not be construed as a waiver of any Government rights.

(h) Subcontracts.

(1) The Contractor shall include this clause (suitably modified to identify the parties) in all subcontracts, regardless of tier, for experimental, developmental, or research work. The subcontractor shall retain all rights provided for the Contractor in this clause, and the Contractor shall not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractor's subject inventions.

(2) In the event of a refusal by a prospective subcontractor to accept such a clause the Contractor--

(i) Shall promptly submit a written notice to the Contracting Officer setting forth the subcontractor's reasons for such refusal and other pertinent information that may expedite disposition of the matter; and

(ii) Shall not proceed with such subcontract without the written authorization of the Contracting Officer.

(3) In the case of subcontracts at any tier, the agency, subcontractor, and Contractor agree that the mutual obligations of the parties created by this clause constitute a contract between the subcontractor and the Federal agency with respect to those matters covered by this clause.

(4) The Contractor shall promptly notify the Contracting Officer in writing upon the award of any subcontract at any tier containing a patent rights clause by identifying the subcontractor, the applicable patent rights clause, the work to be performed under the subcontract, and the dates of award and estimated completion. Upon request of the Contracting Officer, the Contractor shall furnish a copy of such subcontract, and, no more frequently than annually, a listing of the subcontracts that have been awarded.

(i) Preference for United States industry.

Unless provided otherwise, no Contractor that receives title to any subject invention and no assignee of any such Contractor shall grant to any person the exclusive right to use or sell any subject invention in the United States unless such person agrees that any products embodying the subject invention will be manufactured substantially in the United States. However, in individual cases, the requirement may be waived by the Government upon a showing by the Contractor or assignee that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

(End of Clause)

I-114      52.234-1      INDUSTRIAL RESOURCES DEVELOPED UNDER DEFENSE PRODUCTION ACT TITLE III      DEC/1994

(a) Definitions. Title III industrial resource means materials, services, processes, or manufacturing equipment (including the processes, technologies, and ancillary services for the use of such equipment) established or maintained under the authority of Title III, Defense Production Act (50 U.S.C. App. 2091-2093). Title III project contractor means a contractor that has received assistance for the development or manufacture of an industrial resource under 50 U.S.C. App. 2091-2093, Defense Production Act.

(b) The Contractor shall refer any request from a Title III project contractor for testing and qualification of a Title III industrial resource to the Contracting Officer.

(c) Upon direction of the Contracting Officer, the Contractor shall test Title III industrial resources for qualification. The Contractor shall provide the test results to the Defense Production Act Office, Title III Program, located at Wright Patterson Air Force Base, Ohio 45433-7739.

(d) When the Contracting Officer modifies the contract to direct testing pursuant to this clause, the Government will provide the Title III industrial resource to be tested and will make an equitable adjustment in the contract for the costs of testing and qualification of the Title III industrial resource.

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(e) The Contractor agrees to insert the substance of this clause, including paragraph (e), in every subcontract issued in performance of this contract.

(End of clause)

I-115                      52.244-6                      SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS                      OCT/1998

(a) Definitions.

"Commercial item," as used in this clause, has the meaning contained in the clause at 52.202-1, Definitions.

"Subcontract," as used in this clause, includes a transfer of commercial items between divisions, subsidiaries, or affiliates of the Contractor or subcontractor at any tier.

(b) To the maximum extent practicable, the Contractor shall incorporate, and require its subcontractors at all tiers to incorporate, commercial items or nondevelopmental items as components of items to be supplied under this contract.

(c) Notwithstanding any other clause of this contract, the Contractor is not required to include any FAR provision or clause, other than those listed below to the extent they are applicable and as may be required to establish the reasonableness of prices under Part 15, in a                      subcontract at any tier for commercial items or commercial components:

(1) 52.222-26, Equal Opportunity (E.O.11246);

(2) 52.222-35, Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C.4212(a));

(3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C.793); and

(4) 52.247-64, Preference for Privately Owned U.S.-Flagged Commercial Vessels (46 U.S.C.1241) (flow down not required for subcontracts awarded beginning May 1, 1996).

(d) The Contractor shall include the terms of this clause, including this paragraph (d), in subcontracts awarded under this contract.

(End of clause)

I-116                      52.252-6                      AUTHORIZED DEVIATIONS IN CLAUSES                      APR/1984

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the date of the clause.

(b) The use in this solicitation or contract of any DoD FAR Supplement (DFARS) (48 CFR 2) clause with an authorized deviation is indicated by the addition of (DEVIATION) after the name of the regulation.

(End of clause)

I-117                      252.204-7004                      REQUIRED CENTRAL CONTRACTOR REGISTRATION                      SEP/1999

(a) Definitions. As used in this clause--

(1) Central Contractor Registration (CCR) database means the primary DoD repository for contractor information required for the conduct of business with DoD.

(2) Data Universal Numbering System (DUNS) number means the 9-digit number assigned by Dun and Bradstreet Information Services to identify unique business entities.

(3) Data Universal Numbering System +4 (DUNS+4) number means the DUNS number assigned by Dun and Bradstreet plus a 4-digit suffix that may be assigned by a parent (controlling) business concern. This 4-digit suffix may be assigned at the discretion of the parent business concern for such purposes as identifying subunits or affiliates of the parent business concern.

(4) Registered in the CCR database means that all mandatory information, including the DUNS number or the DUNS+4 number, if applicable, and the corresponding Commercial and Government Entity (CAGE) code, is in the CCR database; the DUNS number and the CAGE code have been validated; and all edits have been successfully completed.

(b)(1) By submission of an offer, the offeror acknowledges the requirement that a prospective awardee must be registered in

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the CCR database prior to award, during performance, and through final payment of any contract resulting from this solicitation, except for awards to foreign vendors for work to be performed outside the United States.

(2) The offeror shall provide its DUNS or, if applicable, its DUNS+4 number with its offer, which will be used by the Contracting Officer to verify that the offeror is registered in the CCR database.

(3) Lack of registration in the CCR database will make an offeror ineligible for award.

(4) DoD has established a goal of registering an applicant in the CCR database within 48 hours after receipt of a complete and accurate application via the Internet. However, registration of an applicant submitting an application through a method other than the Internet may take up to 30 days. Therefore, offerors that are not registered should consider applying for registration immediately upon receipt of this solicitation.

(c) The Contractor is responsible for the accuracy and completeness of the data within the CCR, and for any liability resulting from the Government's reliance on inaccurate or incomplete data. To remain registered in the CCR database after the initial registration, the Contractor is required to confirm on an annual basis that its information in the CCR database is accurate and complete.

(d) Offerors and contractors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://www.ccr2000.com>.

(End of clause)

I-118 252.225-7015 PREFERENCE FOR DOMESTIC HAND OR MEASURING TOOLS DEC/1991  
The Contractor agrees to deliver under this contract only hand or measuring tools produced in the United States or its possessions.

(End of clause)

I-119 252.247-7023 TRANSPORTATION OF SUPPLIES BY SEA NOV/1995  
(a) Definitions.

As used in this clause--

(1) Components means articles, materials, and supplies incorporated directly into end products at any level of manufacture, fabrication, or assembly by the Contractor or any subcontractor.

(2) Department of Defense (DoD) means the Army, Navy, Air Force, Marine Corps, and defense agencies.

(3) Foreign flag vessel means any vessel that is not a U.S.-flag vessel.

(4) Ocean transportation means any transportation aboard a ship, vessel, boat, barge, or ferry through international waters.

(5) Subcontractor means a supplier, materialman, distributor, or vendor at any level below the prime contractor whose contractual obligation to perform results from, or is conditioned upon, award of the prime contract and who is performing any part of the work or other requirement of the prime contract. However, effective May 1, 1996, the term does not include a supplier, materialman, distributor, or vendor of commercial items or commercial components.

(6) Supplies means all property, except land and interests in land, that is clearly identifiable for eventual use by or owned by the DoD at the time of transportation by sea.

(i) An item is clearly identifiable for eventual use by the DoD if, for example, the contract documentation contains a reference to a DoD contract number or a military destination.

(ii) Supplies includes (but is not limited to) public works; buildings and facilities; ships; floating equipment and vessels of every character, type, and description, with parts, subassemblies, accessories, and equipment; machine tools; material; equipment; stores of all kinds; end items; construction materials; and components of the foregoing.

(7) U.S.-flag vessel means a vessel of the United States or belonging to the United States, including any vessel registered or having national status under the laws of the United States.

(b) The Contractor shall employ U.S.-flag vessels in the transportation by sea of any supplies to be furnished in the performance of this contract. The Contractor and its subcontractors may request that the Contracting Officer authorize shipment

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in foreign-flag vessels, or designate available U.S.-flag vessels, if the Contractor or a subcontractor believes that--

- (1) U.S.-flag vessels are not available for timely shipment;
- (2) The freight charges are inordinately excessive or unreasonable; or
- (3) Freight charges are higher than charges to private persons for transportation of like goods.

(c) The Contractor must submit any request for use of other than U.S.-flag vessels in writing to the Contracting Officer at least 45 days prior to the sailing date necessary to meet its delivery schedules. The Contracting Officer will process requests submitted after such date(s) as expeditiously as possible, but the Contracting Officer's failure to grant approvals to meet the shipper's sailing date will not of itself constitute a compensable delay under this or any other clause of this contract. Requests shall contain at a minimum--

- (1) Type, weight, and cube of cargo;
- (2) Required shipping date;
- (3) Special handling and discharge requirements;
- (4) Loading and discharge points;
- (5) Name of shipper and consignee;
- (6) Prime contract number; and
- (7) A documented description of efforts made to secure U.S.-flag vessels, including points of contact (with names and telephone numbers) with at least two U.S.-flag carriers contacted. Copies of telephone notes, telegraphic and facsimile message or letters will be sufficient for this purpose.

(d) The Contractor shall, within 30 days after each shipment covered by this clause, provide the Contracting Officer and the Division of National Cargo, Office of Market Development, Maritime Administration, U.S. Department of Transportation, Washington, DC 20590, one copy of the rated on board vessel operating carrier's ocean bill of lading, which shall contain the following information--

- (1) Prime contract number;
- (2) Name of vessel;
- (3) Vessel flag of registry;
- (4) Date of loading;
- (5) Port of loading;
- (6) Port of final discharge;
- (7) Description of commodity;
- (8) Gross weight in pounds and cubic feet if available;
- (9) Total ocean freight in U.S. dollars; and
- (10) Name of the steamship company.

(e) The Contractor agrees to provide with its final invoice under this contract a representation that to the best of its knowledge and belief--

- (1) No ocean transportation was used in the performance of this contract;
- (2) Ocean transportation was used and only U.S.-flag vessels were used for all ocean shipments under the contract;
- (3) Ocean transportation was used, and the Contractor had the written consent of the Contracting Officer for all non-U.S.-flag ocean transportation; or
- (4) Ocean transportation was used and some or all of the shipments were made on non-U.S.-flag vessels without the written consent of the Contracting Officer. The Contractor shall describe these shipments in the following format:

ITEM DESCRIPTION	CONTRACT LINE ITEMS	QUANTITY	TOTAL
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(f) If the final invoice does not include the required representation, the Government will reject and return it to the Contractor as an improper invoice for the purposes of the Prompt Payment clause of this contract. In the event there has been unauthorized use of non-U.S.-flag vessels in the performance of this contract, the Contracting Officer is entitled to equitably adjust the contract, based on the unauthorized use.

(g) The Contractor shall include this clause, including this paragraph (g) in all subcontracts under this contract, which exceed the small purchase limitation of section 13.000 of the Federal Acquisition Regulation.

(End of clause)

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format prescribed by the version of MIL-STD-973 in effect on the date of contract award.  
(end of clause)

I-121                    52.204-7009                    MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATIONS                    JUN/1999  
(TACOM)

(a) All references in the contract to the submission of written documentation shall mean electronic submission. All electronic submissions shall be in the formats and media described in 52.215-4850 in Section L of the solicitation. (See instead 52.213-4859 in Section I of the solicitation for RFQs.)

(b) This shall include all written unclassified communications between the Government and the Contractor except contract awards and contract modifications which shall be posted on the internet. Return receipt shall be used if a commercial application is available. Classified information shall be handled in full accordance with the appropriate security requirements.

(c) In order to be contractually binding, all Government communications requiring a Contracting Officer signature must be sent from the Contracting Officer's e-mail address. The Contractor shall designate the personnel with signature authority who can contractually bind the contractor. All binding contractor communication shall be sent from this contractor e-mail address(es).

(d) Upon award, the Contractor shall provide the Contracting Officer with a list of e-mail addresses for all administrative and technical personnel assigned to this contract.

(e) Unless exempted by the Procuring Contracting Officer in writing, all unclassified written communication after contract award shall be transmitted electronically.

(End of clause)

I-122                    52.246-4026                    LOCAL ADDRESS FOR DD FORM 250                    JAN/1999  
(TACOM)

a. The contractor shall provide a copy of each Material Inspection and Receiving Report (DD Form 250) pertaining to this purchase order to TACOM electronically to the following address: dd250@tacom.army.mil. The subject line shall contain the following information:

(1) "DD250" followed by two (2) blank spaces.

(2) The full contract number. Include the order number if applicable.

(3) Use capital letters for everything in the subject line. Use the dashes in the contract number as they appear on the face page of the contract. If there is an order number, place two blank spaces after the contract number, then insert the order number.

b. This copy meets the requirements for the Purchasing Office copy and the Army Inventory Control Manager copy listed in tables 1 and 2 of DFARS Appendix F.

c. Non-electronic distribution to receiving points other than TACOM, including DCMC, shall be made in accordance with the DFARS, Appendix F.

(end of clause)

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SECTION J - LIST OF ATTACHMENTS

List of Addenda	Title	Date	Number of Pages	Transmitted By
Attachment 001	PROGRAM ACQUISITION PROCESS OVERVIEW			
Attachment 002	SCHEDULES			
Attachment 003	FUNDING AND COST INFORMATION			
Attachment 004	TESTING			
Attachment 005	SPECIFICATIONS AND TECHNICAL DATA			
Attachment 006	LOGISTICS INFORMATION			
Attachment 007	COMMON INTEGRATED DATA ENVIRONMENT AND DRAWINGS			
Attachment 008	IDE REFERENCE			
Attachment 009	DELETED			
Attachment 010	DELETED			

NOTE: DISTRIBUTION STATEMENT D

Distribution of data is authorized to the Department of Defense and U.S. D.O.D contractors only. Only contractors who have been approved to receive Distribution D material will be authorized to obtain the CD-ROM attachments for this solicitation. This determination was made on 01 July 1999. Other requests shall be referred to USA TACOM, AMSTA-LC-CAPA (Mr. Seeburger), Warren , MI 48397-5000

WARNING: This document contains technical data whose export is restricted by the Arms Export Control Act (Title22, U.S.C. Sec 2751 et seq.) or the Export Administration Act of 1979, as amended , Title 50, U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Dissemination in accordance with provisions of D.O.D. Directive 5230.25.

\*\*\* END OF NARRATIVE J001 \*\*\*

**Name of Offeror or Contractor:**

SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
K-1	52.223-4	RECOVERED MATERIAL CERTIFICATION	OCT/1997
K-2	252.209-7001	DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98	MAR/1998
K-3	252.227-7028	TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT	JUN/1995
K-4	52.219-1	SMALL BUSINESS PROGRAM REPRESENTATIONS--ALTERNATE I (NOV 1999)	MAY/1999

(a)

(1) The standard industrial classification (SIC) code for this acquisition is 3519.

(2) The small business size standard is 1000.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations.

(1) The offeror represents as part of its offer that it ( ) is,  
( ) is not,

a small business concern.

(2) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision. The offeror represents, for general statistical purposes, that it ( ) is,  
( ) is not,

(3) Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.  
The offeror represents as part of its offer that it ( ) is,  
( ) is not,

a women-owned small business concern.

(4) Complete only if offeror represented itself as small business concern in paragraph (b)(1) of this provision. The offeror represents, as part of its offer, that--

(i) It ( )\_is,  
( )\_is not

a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It ( )\_is,  
( )\_is not

a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(4)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. Enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_. Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Women-owned small business concern," as used in this provision, means a small business concern--

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

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**Name of Offeror or Contractor:**

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

K-5      52.215-4005      MINIMUM ACCEPTANCE PERIOD      OCT/1985

(a) ACCEPTANCE PERIOD, as used in this provision, means the number of calendar days available to the Government for awarding a contract from the date specified in this solicitation for receipt of offers.

(b) The Government requires a minimum acceptance period of 180 calendar days.

(c) In the space provided immediately below, offers may specify a longer acceptance period than the Government's minimum requirement.

?The offeror allows the following acceptance period: \_\_\_\_\_ calendar days.

(d) An offer allowing less than the Government's minimum acceptance period may be rejected.

\*\*\*

K-6      52.203-11      CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN      APR/1991  
FEDERAL TRANSACTIONS

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989 that:

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan or cooperative agreement:

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer: and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of \$100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than \$10,000, and not more than \$100,000, for each such failure.



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**Name of Offeror or Contractor:**

(End of provision)

K-7      52.204-3      TAXPAYER IDENTIFICATION      OCT/1998

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

☐ TIN: \_\_\_\_\_

☐ TIN has been applied for.

☐ TIN is not required because:

☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

☐ Offeror is an agency or instrumentality of a foreign government;

☐ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

☐ Sole proprietorship;

☐ Partnership;

☐ Corporate entity (not tax-exempt);

☐ Corporate entity (tax-exempt);

☐ Government entity (Federal, State, or local);

☐ Foreign government;

☐ International organization per 26 CFR 1.6049-4;

☐ Other:

(f) Common parent.

☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

☐ Name and TIN of common parent:

Name: \_\_\_\_\_

TIN: \_\_\_\_\_

(End of provision)

K-8      52.204-5      WOMEN-OWNED BUSINESS OTHER THAN SMALL BUSINESS      MAY/1999

(a) Definition. Women-owned business concern, as used in this provision, means a concern that is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Representation. Complete only if the offeror is a women-owned business concern and has not represented itself as a small business concern in paragraph (b)(1) of FAR 52.219-1, Small Business Program Representation, of this solicitation. The offeror represents that it ☐ is a women-owned business concern.

(End of Provision)

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K-9                      52.204-6                      DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER                      JUN/1999

(a) The offeror shall enter, in the block with its name and address on the cover page of its offer, the annotation "DUNS" followed by the DUNS number that identifies the offeror's name and address exactly as stated in the offer. The DUNS number is a nine-digit number assigned by Dun and Bradstreet Information Services.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

(1) Company name.  
(2) Company address.  
(3) Company telephone number.  
(4) Line of business.  
(5) Chief executive officer/key manager.  
(6) Date the company was started.  
(7) Number of people employed by the company.  
(8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet home page at <http://www.customerservices@dnb.com>. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at [globalinfo@mail.dnb.com](mailto:globalinfo@mail.dnb.com).

(End of provision)

K-10                      52.209-5                      CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT,                      MAR/1996  
AND OTHER RESPONSIBILITY MATTERS

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A)( ) are  
( ) are not

presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B)( ) have  
( ) have not,

within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

(C)( ) are  
( ) are not

presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision.

(ii) The Offeror

( ) has  
( ) has not,

within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) Principals, for the purposes of this certification, means officers; directors; owners; partners; and, persons

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having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN A JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

K-11      52.215-4      TYPE OF BUSINESS ORGANIZATION      OCT/1997

The offeror or respondent, by checking the applicable box, represents that--

- (a) It operates as
- ☐ an individual,
  - ☐ a partnership,
  - ☐ a nonprofit organization,
  - ☐ a joint venture, or
  - ☐ a corporation, incorporated under the laws of the State of \_\_\_\_\_

- (b) If the offeror or respondent is a foreign entity, it operates as
- ☐ an individual
  - ☐ a partnership
  - ☐ a nonprofit organization
  - ☐ a joint venture, or
  - ☐ a corporation, registered for business in (country)\_\_\_\_\_.
- (End of provision)

K-12      52.215-6      PLACE OF PERFORMANCE      OCT/1997

- (a) The offeror or respondent, in the performance of any contract resulting from this solicitation,
- ☐ intends
  - ☐ does not intend
- (Check applicable block)

to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks intends in paragraph (a) of this provision, it shall insert in following spaces the required information:

Place of Performance (Street Address, City, County, State, ZIP code)	Name and Address of Owner and Operator of the Plant or Facility if Other than Offeror or Respondent.
--	--

\_\_\_\_\_



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filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

K-16                      52.222-25                      AFFIRMATIVE ACTION COMPLIANCE                      APR/1984

The offeror represents that

(a) It            (    ) has developed and has on file,  
                       (    ) has not developed and does not have on file,  
 at each establishment, affirmative action programs required by the rules and regulations of the Secretary of Labor (41 CFR 60-1 and 60-2), or

(b) It            (    ) has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(End of provision)

K-17                      52.223-13                      CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING                      OCT/1996

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, certifies that--

(1) As the owner operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons:

(Note: the offeror must check each block that is applicable)

     (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

     (ii) The facility does not have 10 or more full-time employees as specified in section 313(b)(1)(A) of EPCRA, 42 U.S.C. 11023(b)(1)(A);

     (iii) The facility does not meet the reporting threshold of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

     (iv) The facility does not fall within Standard Industrial Classification Code (SIC) designations 20 through 39 as set forth in section 19.102 of the Federal Acquisition Regulation; or

     (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

(End of provision)

K-18                      52.227-6                      ROYALTY INFORMATION                      APR/1984

(a) Cost or charges for royalties When the response to this solicitation contains costs or charges for royalties totaling more than \$250, the following information shall be included in the response relating to each separate item of royalty or license fee:

(1) Name and address of licensor;

(2) Date of license agreement;

(3) Patent numbers, patent application serial numbers, or other basis on which the royalty is payable;

(4) Brief description, including any part or model numbers, of each contract item or component on which the royalty is

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payable;

- (5) Percentage or dollar rate of royalty per unit;
- (6) Unit price of contract item;
- (7) Number of units; and
- (8) Total dollar amount of royalties.

(b) Copies of current licenses In addition, if specifically requested by the Contracting Officer before execution of the contract, the offeror shall furnish a copy of the current license agreement and an identification of applicable claims of specific patents.

(End of provision)

K-19 52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION APR/1998

NOTE: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. Disclosure Statement--Cost Accounting Practices and Certification

(a) Any contract in excess of \$500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the offeror's proposal under this solicitation unless the offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

Caution: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

( ) (1) Certificate of Concurrent Submission of Disclosure Statement. The offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows:

(i) Original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable; and

(ii) One copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: \_\_\_\_\_ Name and Address of Cognizant ACO or Federal Official Where Filed: \_\_\_\_\_

The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

( ) (2) Certificate of Previously Submitted Disclosure Statement. The offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: \_\_\_\_\_ Name and Address of Cognizant ACO or Federal Official Where Filed: \_\_\_\_\_

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The offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

( ) (3) Certificate of Monetary Exemption. The offeror hereby certifies that the offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling more than \$25 million (of which at least one award exceeded \$1 million) in the cost accounting period immediately preceding the period in which this proposal was submitted. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

( ) (4) Certificate of Interim Exemption. The offeror hereby certifies that (i) the offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the offeror is not yet required to submit a Disclosure Statement. The offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

Caution: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of \$25 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. Cost Accounting Standards--Eligibility for Modified Contract Coverage

If the offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

( ) The offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the offeror received less than \$25 million in awards of CAS-covered prime contracts and subcontracts, or the offeror did not receive a single CAS-covered award exceeding \$1 million. The offeror further certifies that if such status changes before an award resulting from this proposal, the offeror will advise the Contracting Officer immediately.

Caution: An offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of \$25 million or more or if, during its current cost accounting period, the offeror has been awarded a single CAS-covered prime contract or subcontract of \$25 million or more.

III. Additional Cost Accounting Standards Applicable to Existing Contracts

The offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

- ( ) yes
- ( ) no

(End of provision)

(1) Effectively owned or controlled means that a foreign government or any entity controlled by a foreign government has the power, either directly or indirectly, whether exercised or exercisable, to control the election, appointment, or tenure of the Offeror's officers or a majority of the Offeror's board of directors by any means, e.g., ownership, contract, or operation of law (or equivalent power for unincorporated organizations).

Name of Offeror or Contractor:

(2) Entity controlled by a foreign government--

(i) Means--

(A) Any domestic or foreign organization or corporation that is effectively owned or controlled by a foreign government; or

(B) Any individual acting on behalf of a foreign government.

(ii) Does not include an organization or corporation that is owned, but is not controlled, either directly or indirectly, by a foreign government if the ownership of that organization or corporation by that foreign government was effective before October 23, 1992.

(3) Foreign government includes the state and the government of any country (other than the United States and its possessions and trust territories) as well as any political subdivision, agency, or instrumentality thereof.

(4) Proscribed information means--

(i) Top Secret information;

(ii) Communications Security (COMSEC) information, except classified keys used to operate secure telephone units (STU IIIs);

(iii) Restricted Data as defined in the U.S. Atomic Energy Act of 1954, as amended;

(iv) Special Access Program (SAP) information; or

(v) Sensitive Compartmented Information (SCI).

(b) Prohibition on award.

No contract under a national security program may be awarded to an entity controlled by a foreign government if that entity requires access to proscribed information to perform the contract, unless the Secretary of Defense or designee has waived application of 10 U.S.C. 2536(a).

(c) Disclosure.

The Offeror shall disclose any interest a foreign government has in the Offeror when that interest constitutes control by a foreign government as defined in this provision. If the Offeror is a subsidiary, it shall also disclose any reportable interest a foreign government has in any entity that owns or controls the subsidiary, including reportable interest concerning the Offeror's immediate parent, intermediate parents, and the ultimate parent. Use separate paper as needed, and provide the information in the following format: Offeror's Point of Contact for Questions about Disclosure (Name and Phone Number with Country Code, City Code and Area Code, as applicable).

Name and Address of Offeror	Description of Interest, Ownership Percentage, and Identification of Foreign Government
Name and Address of Entity Controlled by a Foreign Government	
(End of provision)	

K-21                      252.223-7001                      HAZARD WARNING LABELS                      DEC/1991

(a) Hazardous material, as used in this clause, is defined in the Hazardous Material Identification and Material Safety Data clause of this contract.

(b) The Contractor shall label the item package (unit container) of any hazardous material to be delivered under this contract in accordance with the Hazard Communication Standard (29 CFR 1910.1200 et seq). The Standard requires that the hazard warning label conform to the requirements of the standard unless the material is otherwise subject to the labelling requirements



Name of Offeror or Contractor:

of one of the following statutes:

- (1) Federal Insecticide, Fungicide and Rodenticide Act;
- (2) Federal Food, Drug and Cosmetics Act;
- (3) Consumer Product Safety Act;
- (4) Federal Hazardous Substances Act; or
- (5) Federal Alcohol Administration Act.

(c) The Offeror shall list which hazardous material listed in the Hazardous Material Identification and Material Safety Data clause of this contract will be labelled in accordance with one of the Acts in paragraphs (b)(1) through (5) of this clause instead of the Hazard Communication Standard. Any hazardous material not listed will be interpreted to mean that a label is required in accordance with the Hazard Communication Standard.

MATERIAL (If None, Insert <u>None</u> .)	ACT
_____	_____
_____	_____
_____	_____

(d) The apparently successful Offeror agrees to submit, before award, a copy of the hazard warning label for all hazardous materials not listed in paragraph (c) of this clause. The Offeror shall submit the label with the Material Safety Data Sheet being furnished under the Hazardous Material Identification and Material Safety Data clause of this contract.

(e) The Contractor shall also comply with MIL-STD-129, Marking for Shipment and Storage (including revisions adopted during the term of this contract).

(End of clause)

K-22                    252.225-7000                    BUY AMERICAN ACT - BALANCE OF PAYMENTS PROGRAM CERTIFICATE                    SEP/1999

(a) Definitions. "Domestic end product," "qualifying country," "qualifying country end product," and "nonqualifying country end product" have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) Evaluation. Offers will be evaluated by giving preference to domestic end products and qualifying country end products over nonqualifying country end products.

(c) Certifications.

(1) The Offeror certifies that-

- (i) Each end product, except those listed in paragraphs (c)(2) or (3) of this provision, is a domestic end product; and
- (ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror certifies that the following end products are qualifying country end products:

Qualifying Country End Products

<u>Line Item Number</u>	<u>Country of Origin</u>
-------------------------	--------------------------

(List only qualifying country end products.)

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(3) The Offeror certifies that the following end products are nonqualifying country end products:

Nonqualifying Country End Products

Line Item Number

Country of Origin (If known)

(End of provision)

K-23 252.225-7003 INFORMATION FOR DUTY-FREE ENTRY EVALUATION MAR/1998

(a) Does the offeror propose to furnish-

(1) A domestic end product with nonqualifying country components for which the offeror requests duty-free entry; or

(2) A foreign end product consisting of end items, components, or material of foreign origin other than those for which duty-free entry is to be accorded pursuant to the Duty-Free Entry--Qualifying Country Supplies (End Products and Components) clause or, if applicable, the Duty-Free Entry--Eligible End Products clause of this solicitation?

Yes ( )

No ( )

(b) If the answer in paragraph (a) is yes, answer the following questions:

(1) Are such foreign supplies now in the United States?

Yes ( )

No ( )

(2) Has the duty on such foreign supplies been paid?

Yes ( )

No ( )

(3) If the answer to paragraph (b)(2) is no, what amount is included in the offer to cover such duty?

\$\_\_\_\_\_

(c) If the duty has not been paid, the Government may elect to make award on a duty-free basis. If so, the offered price will be reduced in the contract award by the amount specified in paragraph (b)(3). The Offeror agrees to identify, at the request of the Contracting Officer, the foreign supplies which are subject to duty-free entry.

(End of provision)

K-24 252.235-7010 ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER MAY/1995

(a) The Contractor shall include an acknowledgment of the Government's support in the publication of any material based on or developed under this contract, stated in the following terms: This material is based upon work supported by the \_\_\_\_\_ (name of contracting agency(ies)) under Contract No. \_\_\_\_\_ (Contracting agency(ies) contract number(s)).

(b) All material, except scientific articles or papers published in scientific journals, must, in addition to any notices or disclaimers by the Contractor, also contain the following disclaimer: Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the \_\_\_\_\_ (name of contracting agency(ies)).

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**Name of Offeror or Contractor:**

(End of clause)

K-25                      252.247-7022              REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA                      AUG/1992

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it--

( ) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

( ) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

K-26                      TACOM                      INVENTION IDENTIFICATION AND DISCLOSURE PROCEDURES                      APR/1985

The offeror's attention is called to the requirement in the PATENT RIGHTS clause that effective procedures be established and maintained to assure inventions are promptly identified and disclosed and that a copy of such procedures will be furnished to the Contracting Office upon request. The successful offeror may be required to submit its procedures upon contract award.

Date of Contractor's Current Procedures: \_\_\_\_\_

\*\*\*

K-27                      52.204-7005              OFFEROR'S DATAFAX NUMBER AND E-MAIL ADDRESS                      NOV/1996

(TACOM)

(a) If you have a data fax number, please provide it below.

\_\_\_\_\_

(b) If you have a company Internet address that we can use in the future when sending out electronic notices and possibly solicitations, please provide the complete e-mail address below.

\_\_\_\_\_

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K-28                      52.211-4035              PHOSPHATE COATING PROCEDURE APPROVAL                      JAN/1988

(TACOM)

(a) Please note that the contract technical data package incorporates DOD-P-16232, a military specification that requires Governmental review and approval of the phosphate coating procedures to be used by the Contractor. Such approval must precede the start of production.

(b) In consequence, if you have not obtained TACOM approval of your phosphate coating procedures, or if you have not obtained TACOM approval of the exact procedure that you will use if awarded this contract, you must be prepared to submit and gain approval of your proposed procedure before you initiate performance on any contract awarded as a result of this solicitation. (Where approval is required, the Contractor shall provide two copies of the required documents through the cognizant Administrative Contracting Officer (ACO) for his or her initial review and evaluation to the attention of the buyer, US Army TACOM (address and office symbol are given on the face of this contract). Be sure to cite the contract number on all coating procedures being submitted for TACOM review.)

(c) If you have previously received TACOM review and approval of the same coating procedures you will use if awarded this contract, then that previous approval may be construed as meeting the requirements in DOD-P-16232 for preproduction approval. The Government reserves the right to require an updated approval if substantial time has passed since the last approval, or if we have encountered or suspect quality problems stemming from noncompliance with specification coating requirements. You will be notified by the Administrative or Procuring Contracting Officer after award if an updated approval of your coating procedures

Name of Offeror or Contractor:

will be required.

(d) If you HAVE NOT received TACOM approval of your phosphate coating procedures, so indicate by checkmarking the following representation:

( ) This company has no record of having received TACOM approval of our proposed phosphate coating procedures, as described in DOD-P-16232. If awarded a contract resulting from this solicitation, we will secure the required approval before beginning production, at no additional cost to the Government, and at no extension in delivery schedule.

(e) If you HAVE received a previous TACOM approval of your proposed phosphate coating procedures, so indicate by completing all parts of the following certification:

(1) TACOM review and approval of our phosphate coating procedures was last obtained on (date)\_\_\_\_\_, for contract \_\_\_\_\_.

We further represent that phosphate coating as required for that contract:

- ( ) was performed in-house, in our production facility.
- ( ) was performed out-of-house, by the \_\_\_\_\_ company, address as follows:

\_\_\_\_\_.

- (2) This company represents that if awarded a contract resulting from this solicitation, we
- ( ) will
  - ( ) will not

use exactly the same coating procedures (including, if applicable, the same subcontractor as indicated in paragraph (1) immediately above) as those for which we have received TACOM approval as indicated above.

\*\*\*

K-29                      52.223-4002                      USE OF CLASS I OZONE-DEPLETING SUBSTANCES (CIODS)                      DEC/1993  
(TACOM)

(a) Definitions.

(1) Class I Ozone-Depleting Substances (CIODS) refers to the class of substances identified in Section 602(a) of the Clean Air Act, (42 U.S.C. 7671a(a)), as amended by a final EPA ruling in the December 10, 1993 issue of the Federal Register. The listing is reproduced below:

- a. chlorofluorocarbon-11 (CFC-11)
- b. chlorofluorocarbon-12 (CFC-12)
- c. chlorofluorocarbon-13 (CFC-13)
- d. chlorofluorocarbon-111 (CFC-111)
- e. chlorofluorocarbon-112 (CFC-112)
- f. chlorofluorocarbon-113 (CFC-113)
- g. chlorofluorocarbon-114 (CFC-114)
- h. chlorofluorocarbon-115 (CFC-115)
- i. chlorofluorocarbon-211 (CFC-211)
- j. chlorofluorocarbon-212 (CFC-212)
- k. chlorofluorocarbon-213 (CFC-213)
- l. chlorofluorocarbon-214 (CFC-214)
- m. chlorofluorocarbon-215 (CFC-215)
- n. chlorofluorocarbon-216 (CFC-216)
- o. chlorofluorocarbon-217 (CFC-217)
- p. halon-1211
- q. halon-1301
- r. halon-2402
- s. carbon tetrachloride
- t. methyl chloroform
- u. methyl bromide
- v. hydrobromofluorocarbons (HBFCs)
- w. All isomers of the substances listed in this paragraph (a)(1) except for 1,1,2-trichloroethane, which is an isomer of methyl chloroform.

(2) Directly requires the use of CIODS means that the Government's specification or technical data package, at any

Name of Offeror or Contractor:

tier, explicitly requires the use of any Class I Ozone-Depleting Substance (CIODS) in performance of the contract.

(3) Indirectly requires the use of CIODS means that the Government’s specification or technical data package, while not explicitly requiring the use of any CIODS, does require a feature that you can meet or produce only by the use of CIODS.

(b) Per Section 326 of Public Law 102-484, the Department of Defense cannot award any contract that directly or indirectly requires the use of CIODS unless (i) the use of such substances is essential for contract performance, and (ii) no suitable substitute for the CIODS currently is available.

(c) Before releasing this solicitation, we conducted a best effort review of its technical requirements, standards, and specifications, to see if any contain requirements for CIODS. If we identified any such CIODS requirements, they are identified in subparagraph (d)(1) below.

(1) In addition, to help TACOM meet its obligations under Public Law 102-484, we ask you for input. If you have any special knowledge about any CIODS requirements that our specifications impose, whether directly or indirectly, or if you know about potential substitutes for any CIODS required by our specifications, we would appreciate the information.

(2) It should be understood that you are not obligated to give us the information requested by this provision, and that we cannot provide any separate or special payment for doing so. However, we are asking only for information based on knowledge that is readily available to you as a supplier in this industry. We do not expect you to do any review of our specifications more extensive than the one you perform in order to develop your price.

(d) Please summarize your own review of our specification/technical data package, by completing the following:

- (1) During our review of the specification or technical data package in this solicitation, we--
- ☐ have

☐ have not

found any direct requirements to use any CIODS. (If have is checked above, offerors are asked to identify, on the following lines, (i) the specifications and standards for this acquisition that directly require the use of CIODS; (ii) the CIODS required by the listed specifications and standards; and (iii) whether any substitutes are known to be available for the listed CIODS.)

Spec/Standard	Required CIODS	Substitute Available?

(2) Further, in our review of the specification or technical data package in this solicitation, we--

- ☐ have

☐ have not

found any indirect requirements to use any CIODS. (Offerors who check have above are asked to identify, on the following lines, (i) the specifications and standards for this acquisition that indirectly require the use of CIODS; (ii) the CIODS indirectly required by each listed specification and standard; and (iii) whether any substitutes are known to be available for the listed CIODS.)

Spec/Standard	Required CIODS	Substitute Available?

(e) Offerors who check have in paragraphs (d)(1) or (2) above also are requested to say whether substitutes are known to be available for any of the CIODS. If an available substitute would perform less well than the CIODS would perform, please let us

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know what the technical trade-offs are to the extent that you have such information available.

(f) If you checked have in paragraphs (d)(1) or (2) above, and also indicated that substitutes for CIODS are available, we need to know whether use of the suggested substitute would have any effect on your proposed price. If your proposal price for compliance with our current specifications differs from what your price would be if the substitute for CIODS were required, we ask that you let us know what the difference would be in Section B of this solicitation, by giving us two prices or offers:

--One price/offer, labeled with CIODS, will be the offered price in the event that CIODS are used.

--The second price/offer, labeled without CIODS, will be the price offered if substitutes for CIODS are used, and will specify the substitute(s) being proposed for use.

(g) Section 326 of Public Law 102-484 reflects the national and international interest in minimizing the use of CIODS. For this reason, TACOM reserves the right to (i) determine the suitability of substitutes for CIODS when such potential substitutes are available; and (ii) change the specification in any contract awarded as a result of this solicitation, to require the use of suitable substitutes in lieu of CIODS.

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SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

SEE INSERT - TO BE INCORPORATED AFTER APPROVAL

INSTRUCTIONS, CONDITIONS AND NOTICES TO OFFERORS

L.1 General Proposal Instructions and Content:

L.1.1 The proposal, subject to the late proposals and revisions section of FAR 52.215-1, "Instructions to Offerors Competitive Acquisition (Oct 1997) Alt I (Oct 1997)", shall be submitted in the format and quantities set forth below. Section M, "Evaluation Criteria For Award", sets forth the evaluation guidance pertaining to Areas, Elements and Factors. The "Areas" are (1) Technical, (2) Logistics, (3) Performance Capability and (4) Total Ownership Cost. Proposals shall be submitted in the English language and in five (5) separate volumes for Government review. As used herein, the term "volume" may include various types of information media, such CD-ROM, 3.5 inch diskettes, or some other format as specified in this solicitation. The first volume shall contain an executive level summary of the offerors proposed approach, the Program Work Breakdown Structure (PWBS), Contract Work Breakdown Structure (CWBS) and the proposed SOW. This volume shall also contain solicitation Sections A through K with all fill-ins completed, the fill-ins for the cost and price proposal and the Standard Form 33. The second volume shall set forth the offeror's technical approach, for meeting the propulsion system size and the weight and performance requirements. The third volume shall address the offeror's logistics approach. The fourth volume will be the contract performance capability/past performance and small business participation. The fifth volume shall detail the offeror's estimated costs for each Contract Line Item Number (CLIN) and all required supporting data.

L.1.2 The offeror's proposal shall be submitted in five (5) identical sets of CD-ROMs or 3.5 diskettes. In addition, one original hard copy of the Volume 1 section of the proposal shall be submitted in printed form.

L.1.3 File format must be Microsoft Word 97, Excel 97, and Power Point 97 or a file format acceptable to the Contracting Officer. Engineering Drawings shall be submitted in accordance with paragraph L.3.2.2 below. Pages shall be printed on one side only and shall have print no smaller than 12 pitch, on standard eight and one-half (8 1/2) by eleven (11) inch paper. However, single fold-out pages up to seventeen (17) by eleven (11) inches may be used. Scale Drawings may be larger than 17" X 11". Each volume shall be sequentially numbered (for example, copy one (1) of...) and shall include: (a) Title page; (b) Table of Contents; and (c) List of Tables, Figures and Attachments. All pages shall be sequentially numbered.

L.2 Volume 1 - The Proposal Overview and Scope of Work

L.2.1 Volume 1 shall be divided into five sections: Section 1 is the Executive Summary, Section 2 is the Program Work Breakdown Structure (PWBS) and the Contract Work Breakdown Structure (CWBS), Section 3 is the Proposed Contract Scope of Work, Section 4 contains the performance specifications/characteristics of the proposed hardware to be incorporated in the model contract. Section 5 contains solicitation Sections A through K with all fill-ins completed, the fill-ins for the cost and price proposal and the signed Standard Form 33.

L.2.2 Section 1 - Executive Summary: The Executive Summary shall give a general description of the offeror's proposed solution. The Executive Summary shall not be more than 15 pages in length and should include:

- a. A brief description of the offeror's organizational structure that will be responsible for performing the contract efforts, including any established major subcontractors/team members and their degree of responsibility. Include a general description of the expected role of the vehicle system integrating contractors and how that relationship will be established.
- b. A general description of what is being proposed with emphasis on how that approach satisfies each of the Government's overarching objectives (paragraph C.1.1 of the SOO).
- c. Discuss the Phase II assumptions and impacts related to the transition from development to production and the sustainability of the approach. For Abrams include the field application impacts and assumptions.

L.2.3 Section 2 - Program and Contract Work Breakdown Structure:

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L.2.3.1 Offerors shall break down their approach into a PWBS which must encompass the entire Phase I effort (development and integration) through the completion of prototype test and evaluation. The PWBS shall be traceable to the SOO. Using the matrix in Enclosure B to Attachment 1, offerors shall divide the Phase I PWBS into Category 1 Engine Development Work and Category 2 Integration Work. "Category 1 - Engine Development Work" is generally defined as the efforts required to design, develop and produce a prototype engine and the engine specific interfacing hardware to make the engine compatible with both vehicles. "Category 2 - Systems Integration Work" is generally defined as the system integration efforts, including other propulsion system/power pack hardware (such as transmission development), and/or vehicle hardware interface changes, prototype application, system level software and vehicle level testing, etc. For Crusader, the Army's intent is to contract for the Category 2 work through the systems integration contractor (UDLP) with a directed subcontract for transmission development to the offeror selected in response to this RFP. For Abrams, Category 2 may be contracted for under the option for this contract (CLIN 0004AA) and/or with the systems integration contractor (GDLS). Guidelines for development of a PWBS and a CWBS can be found at [www.acq.osd.mil/pm/newpolicy/wbs/wbs.html](http://www.acq.osd.mil/pm/newpolicy/wbs/wbs.html).

L.2.3.2 The PWBS should be further divided into common and system unique efforts to allow the segregation of system unique work and cost from common work and cost so that Abrams and Crusader appropriated funds can be properly placed against the corresponding system unique work.

L.2.3.3 The offeror shall break down the PWBS for all Category 1 - Engine Development Work into its lowest task level under a CWBS for both Common and System Unique efforts.

L.2.4 Section 3 - Proposed Contract Scope of Work The offeror shall link the CWBS tasks in a logical flow of activities to form the Scope of Work (SOW). The offeror's proposed SOW will replace the Section C SOO herein and form the Section C SOW for the resulting common engine contract. The SOW shall include the delivery of 13 prototype engines for Abrams and 11 prototype engines for Crusader. The engines to be developed for each vehicle system must include all engine specific interfaces, accessories, and modifications that are required to make the engine compatible with each vehicle system. The SOW shall result in the completion of validated production specifications, drawings and ICDs that reflect a final design that meets the program objectives stated in C.1.1.

L.2.4.1 For Abrams, the Army may consider it advantageous to include some or all of the Abrams unique "Category 2- Integration Work " under the contract if the offeror clearly demonstrates its capability to successfully perform such work, either through its own capabilities or through established subcontracts. Therefore, for the Abrams Phase I development effort, the offeror may propose a CWBS and corresponding SOW for any or all "Category 2 - Integration Work". However, if an offeror's common propulsion system solution requires a new Abrams transmission or modification to the existing Abrams transmission, a Category 2 proposal is required for the transmission. In the event a Category 2 proposal is made, a separate SOW shall be developed for the Abrams "Category 2 ? Integration Work".

L.2.4.2 The award of any Abrams "Category 2 ? Integration Work" will be at the Government's option. To be eligible to receive the Abrams "Category 2" work, the offeror must separately describe and price the Abrams "Category 2" work in the proposed SOW, structured according to a detailed CWBS and traceable to the PWBS and the appropriate portions of the SOO. In addition, the offeror shall provide performance characteristics/specifications that clearly describes all additional hardware to be produced under the contract. If the offeror proposes to perform the entire Phase I development and integration effort for Abrams under this contract, it shall comply with the system level performance specifications at Enclosures A and E of Attachment 5. This effort will be contracted for under CLIN 0004AA.

L.2.4.3 For the Crusader development effort, the Government will not award any "Category 2 - Integration Work". However, the offeror shall propose a CWBS and corresponding SOW for the transmission development effort, which the Army intends to acquire under the existing Crusader System Development contract with UDLP. Any other Category 2 work necessary for Crusader will also be acquired under the existing Crusader System Development contract with UDLP. To that end, the government intends to provide the successful offeror's information to UDLP to facilitate awarding a sub-contract to the offeror.

L.2.5 Section 4 Contract Performance Specifications and ICDs: The offeror shall provide performance specifications, or at a minimum, the detailed performance characteristics of the items to be furnished under the contract. The specifications/characteristics should reflect the objective production configuration. The offeror's SOW shall also include the development, maintenance and delivery of Interface Control Documents (ICDs) that define all interfaces between the engine, other hardware furnished under this contract, and all other vehicle subsystems. There will be two types of ICDs submitted with the offeror's proposal:

L.2.5.1 The B-kit ICDs define the interface between the common engine and each vehicle's engine specific attaching or interfacing components that are required to accommodate the specialized configuration and operational requirements of the Abrams and Crusader. The B-Kit ICDs will become part of the contract at the time of award.

L.2.5.2 The A kit ICDs define the interfaces between the common engine and the rest of the vehicle system, after the engine is configured with the engine specific Abrams and Crusader attaching or interfacing components.

L.2.6 Section 5 - Solicitation Sections: Under this section the offeror shall include solicitation Sections A through K with



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all fill-ins completed, the Section B price fill-ins and the signed Standard Form 33.

**L.3 Technical Volume:**

**L.3.1 General:** Offerors shall describe the objective production configuration propulsion system solution for Abrams and fully integrated power pack for Crusader. The offeror's description shall be of sufficient detail to allow the Army to understand and determine the technical risk and the technical merit of the offeror's proposed solution with regard to the evaluation criteria in Section M. Note that all enclosures referred to under this technical volume are found in Attachment 5 to the solicitation.

**L.3.1.1** The offeror's description shall include: CAD-generated conceptual designs consisting of 2-D engineering drawings and 3-D solid models; appropriate completed data description sheets given in Enclosure C of Attachment 5 for Abrams and Enclosure D of Attachment 5 for Crusader, for the engine and transmission used in their approach; additional data and specifications for components used in the design solution which are not addressed in the enclosures in Attachment 5. The engineering drawings and solid models shall be accompanied by and traceable to a preliminary Bill of Materials (BOM). The BOM and engineering data package will be used by the government to analyze and evaluate the risk and merit related to the "Size and Weight", "Performance Mobility", and "Vehicle Integration" elements as well as a cost realism assessment of the proposed design.

**L.3.2 Element 1 Size and Weight:** The offeror shall describe its design approaches for meeting Abrams and Crusader size and weight requirements. The Army will evaluate the drawings and the BOM described below to assess the feasibility/achievability of meeting these size and weight requirements. In addition, the offeror shall complete Data Sheet #5 in Enclosure C for the Abrams vehicle weight analysis. For Abrams, the proposed propulsion system solution, when integrated with all associated subsystems shall not exceed the total weight of the engine and all other subsystems or components displaced from the vehicle as shown in Attachment 5, Enclosure C.5. For Crusader, the wet weight of the engine, transmission, complete cooling system and on-board fuel (defined in Enclosure F, para. 3.2.2.2.1) shall not exceed 10,000 lbs as specified in M.3.2.

**L.3.2.1** For Abrams, the Army will allow limited changes to the Abrams engine compartment as shown in Enclosure A, Attachment 5, to accommodate solutions under the following restrictions:

.The external dimensions of the engine compartment shall not expand forward into the ammunition compartment, expand laterally to cause an increase the total width of the tank, downward to cause a decrease in the current ground clearance or upward to interfere with gun depression or turret movement.

.The external dimensions of the back deck and rear grille doors may extend rearward provided that there is no degradation in system survivability or transportability.

**L.3.2.2 Bill of Materials (BOM):** The offeror shall clearly delineate the physical compositions of the proposed integrated solution by providing a matrix which reflects the proposed (1) BOM for each vehicle, (2) the weight of each component in the BOM, and (3) technology maturity level of each component.

a.The BOM shall include all propulsion system/integrated power pack components defined in C.1.3 and C.1.4 indentured by level of assembly including required external interfaces such as hull connection points/mounting provisions; power pack cooling including heat exchangers (sized), cooling lines, fans/fan motor controllers (and fan power requirements), oil and coolant tanks, and plumbing/ducting/plenums; air induction and filtration; exhaust ducting; fuel lines; drive-by-wire actuators/controllers; starter; wiring harnesses; power take-offs (PTOs); mechanical, electronic and cooling disconnects.

b.The offeror shall describe the maturity of the design with regard to the objective production configuration for each vehicle. The technology maturity levels in the matrix should be defined as: (1) "Concept", (2) "Design", (3) "Development", (4) "Mature not produced", and (5) "Production". In addition, the offeror shall describe any design maturation/technical growth required to achieve the objective form, fit and function.

**L.3.2.3 Drawings:** The offeror shall provide dimensioned propulsion system/power pack layouts and component drawings, including placement and packaging of all key automotive subsystems within the space claim provided for Abrams at Enclosure A and for Crusader at Enclosures F.1 and F.2. Drawings shall be submitted in electronic format. Component level drawings shall include major components such as the engine, transmission, cooling system components, air induction and exhaust. The drawings shall show at least three full views with components and clearances identified. The offeror shall provide additional drawings of the vehicle configuration changes required (if any) by their design approach. For Crusader, the integrated system shall include the power pack mounted on a roll-in/roll-out mechanism.

a.The offeror shall develop the 2-D engineering drawings and 3-D solid models using one of the following platforms.

- 1.Unix Workstation Hardware (preferred)
- 2.NT Workstation Hardware

b.The offeror shall document all 2-D engineering drawings and 3-D solid models in one of the following formats.

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- 1.Pro/ENGINEER Rev 2000I, by Native Parametric Technology, INC (preferred)
- 2.STEP AP 203 format
- 3.DXF (for 2-D engineering drawings)
- 4.IGES (for 3-D solid models or drawings)

c.The offeror shall submit all 2-D engineering drawings and 3-D solid models on one of the following media types:

- 1.8mm tar (UNIX, preferably from an SGI) Data Grade Tape Cartridge (preferred)
- 2.CD-R disk (either NT or Unix /Joliet Format )
- 3.4mm tar (UNIX, preferably from an SGI) Data Grade Tape Cartridge
- 4.Zip disk(s) from NT
- 5.Jaz disk(s) from NT

L.3.3 Element 2 Propulsion System Performance: The offeror shall complete the compliance matrix corresponding to the requirements in the Abrams and Crusader performance specifications at Enclosures E and H, respectively. In the event of similar system requirements for both Abrams and Crusader, the more stringent specification requirement shall govern. Performance specifications shown in Enclosure E for Abrams supercede performance specifications shown in the system specification in Enclosure A. The offeror shall note in the compliance matrix whether its approach meets the specification requirement, state the requirement value and/or range of values achievable for the proposed approach and reference the basis for each assessment (i.e. Level 1-Engineering Judgement, Level 2-Engineering Analysis, Level 3-Interim Test data, Level 4-Objective Test). The Government reserves the right to request the support documentation for any such assertions to be provided within 5 days of the Government's request. For the purpose of this evaluation, the performance requirements are divided into two factors.

L.3.3.1 Factor 1 Threshold Requirements must be met without exception. For Abrams, as stated in Enclosure E, these are Mobility System Function (para 1.0), Idle Fuel Consumption (para 1.1.1), Cruising Range (para 1.1.2), Steering and Braking (para 1.1.3), Sustained Speeds (para 1.1.4), Tractive Effort Cooling (para 1.1.5), Starting (para 1.1.6), Fording (48") (para 1.1.7), NBC System Air Requirement (para 1.1.8), Physical Requirements (para 1.2), Induced Environment (para 1.3), Transportability (para 1.4), Engine Controls (para 1.5), Durability (para 1.6), and Reliability (para 1.7); and for Crusader, as stated in Enclosure F, Speed on Grade (para 3.2.1.1.4), Survivability Move (Para 3.2.1.3.1), Steering and Braking (para 3.2.1.2), Cooling (para 3.2.1.3.5) and Towing Another Vehicle (para 3.2.1.3.6). The offeror shall demonstrate conformance with these requirements by providing the following information:

L.3.3.1.1 In addition to the data provided by the compliance matrix, the offeror shall demonstrate conformance each of the threshold requirements stated above by: describing in detail their approach; showing detailed engineering analysis including all assumptions , calculations; Providing complete data sheets 1 or 2, and 3, 4, 6, 7 and 8 from Enclosure C for Abrams and 1 or 2, and 3, 4, 5, 6, and 7, and from Enclosure D for Crusader; Providing any additional component data used in system design that is not included in data sheets of Enclosure C and D .

L.3.3.1.2 With regard to the threshold requirement for "cooling" (paragraph 1.1.5 of Enclosure E and paragraph 3.2.1.3.5 of Enclosure F), offerors shall provide detailed cooling system descriptions and schematics (in accordance with Data Sheet 4 in enclosure C for both Abrams and Crusader) to include airflows, coolant flows, pressure losses, heat exchangers (heat rejection, face area, size), fans/fan motor controllers, fan power requirements, fan locations. Descriptions shall also include oil and coolant tank requirements, grille size, weight and location requirements and plumbing/ducting/ plenums requirements. The schematic is to be completed for three Abrams mobility points: maximum vehicle speed and cooling requirement design point of .7 TE/WT @ 125°F, NBC off and .67 NBC on @ 125 °F, continuous full throttle tractive effort. Crusader schematics shall be completed for all operating conditions within the tractive effort to weight vs. speed envelope defined by 0.7 TE/GVW at continuous full throttle and 67 kph (41.6mph). For Crusader, the offeror shall provide speeds at 49 degrees Celsius for all points on the speed-on-grade curve shown in table 3.2.1.1.4, Enclosure F, Attachment 5.

L.3.3.1.3 Reliability/Durability: With regard to the Abrams Threshold and Crusader Objective requirements for reliability/durability (R/D), the offeror's approach will be evaluated to assess the propulsion system/power pack's current or projected capability to meet the R/D requirements of both Abrams and Crusader in accordance with the R/D assumptions in Enclosure E to Attachment 6. The offeror's proposal should provide sufficient data/predictions to allow the Government to understand the baseline inherent R/D of the propulsion system/power pack, and the growth required to achieve Abrams threshold/Crusader objective reliability requirements specified in Attachment 5, Enclosure E, paragraphs 1.6 and 1.7 for Abrams, and Attachment 5 enclosures F paragraph 3.2.3 for Crusader. The offeror shall provide:

L.3.3.1.3.1 Predictions of matured propulsion system/power pack failure rates or mean-time-between-failure (MTBF) in terms of mission reliability (Combat Mission Failures or System Aborts), non-deferrable, performance degrading failures (System Failures or Essential Function Failure), and basic reliability (Unscheduled Maintenance Actions or Non-Essential Function Failures). The offeror should include the prediction methodology, list of assumptions, duty cycles, mission profiles, and sources for base failure rate data. Predictions should be presented at the subassembly, assembly, and subsystem levels.

L.3.3.1.3.2 A description of the offeror's approach for failure reporting and corrective action identification and tracking.

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L.3.3.1.3.3 Empirical data, if any, summarizing the R/ D performance (in the parameters described above) of the propulsion system/power pack during brassboard/prototype and/or developmental testing. Such data should include the test item quantities, mission profiles, test duration, test environment, and any International Test Operating Procedures (ITOP) followed, if applicable. The failure definitions and scoring criteria used to establish the performance measurements shall be provided.

L.3.3.1.3.4 If Failure Mode, Effects and Criticality Analyses (FMECA) are generated, summaries of catastrophic and critical failure modes should be discussed, with mitigation plans, if known.

L.3.3.1.3.5 Service Life or durability calculations and or estimates for those components or subsystems seen to be life limited, including the mission profile assumed during service. Durability failures are defined as propulsion system/power pack malfunctions that require the use of repair parts and skills authorized for echelons (Fourth and Fifth) at the Sustainment Maintenance Level. A durability failure is also charged when engine power degrades below 60% of its rating and cannot be restored by adjustment, maintenance action or by replacement of parts (i.e. filters, seals, fasteners) at authorized echelons (First through Third) of Tactical Field Maintenance Levels.

L.3.3.1.3.6 Reliability Growth methodologies used to plan, track and assess the engine/power pack growth through development, including the growth curves, if available.

L.3.3.2 Factor 2 Objective Requirements consist of the remaining system performance requirements. In addition to the data supplied by the compliance matrix, the offeror shall describe their approach to meeting the objective requirements and provide any additional engineering analysis and additional component data used in system design that is not included in data sheets of Enclosure C and D to support their design solution. For Abrams, Data sheet 6 and 9 must be completed for the BFD assessment.

L.3.3.2.1 While the offeror is expected to propose a solution that fully meets all requirements, the Government is interested in acquiring a best-value solution that balances performance, cost and schedule risk. Therefore, the Government will consider performance trade-offs for objective requirements only if the offeror clearly substantiates the off-setting benefits to the Government. The offeror is cautioned that any proposed performance trade-off must have compelling performance improvements in other areas, significant cost benefits, and/or significant schedule benefits to be considered desirable by the Government. Any trade-off proposed by the offeror shall be accompanied by a trade-off analysis that provides rationale for the proposed trade-off and clearly substantiates the benefits to the Government.

L.3.3.2.2 In addition to the data requested in the compliance matrix, the offeror shall describe their Abrams design solution for:

- .Supplying compressed air to the existing Abrams NBC system
- .Providing power for the Abrams hydraulic system
- c.Providing electrical power generation
- d.Providing continuous clean air to the engine.
- e.Propulsion system lubrication design for Abrams

L.3.4 Element 3 Propulsion System Integration: The Government will assess the extent and complexity of the integration effort by evaluating the interface requirements for each vehicle, as well as, the Abrams "puts" and "takes", and ease of field application for Abrams.

L.3.4.1 Interface Requirements: The offeror shall provide a preliminary Interface Control Document with associated drawings, charts, data, layouts, and methodology required to define interfaces between the proposed propulsion system/power pack and all other vehicle system elements as described in C.4.

L.3.4.2 Puts and Takes: The offeror shall provide a list of "puts" and "takes" for the Abrams propulsion system and vehicle system (e.g. fuel cells, fire suppression, grilles, etc.) in accordance with Enclosure G. Offerors shall generally explain the methodology and rationale for the "puts" and "takes" with emphasis on any significant vehicle design and performance impacts associated with the list of "puts" and "takes". If additional vehicle weight data for Abrams is required, the offeror must request the data within 30 days of receipt of RFP. The Government will provide the additional data within 5 days of receipt of the request.

L.3.4.3 Field Application for Abrams: The offeror shall describe the approach for installing the new propulsion system in fielded tanks using the field application assumptions in Enclosure D to Attachment 6 as a baseline. The offeror shall describe the application process and the manpower, time and tools required to perform each operation of the process.

**L.4 Logistics Volume**

L.4.1 General: The offeror shall summarize its overall approach to implement a performance based contractor logistics support effort. The offeror's summary shall be organized in a way that takes the Government evaluator through the life cycle support concept (from development of logistics documentation through the maintenance and long term supply support concept) as it relates specifically to the offeror's proposed propulsion system solution for each vehicle. Offerors shall base their logistics

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approach on the assumptions provided in Attachment 6. The offeror's description of the overall logistics concept shall specifically address each of the logistics elements noted below.

L.4.2 Element 1 - Commonality: The offeror shall complete the data sheet at Enclosure B to Attachment 6 to identify the (1) Proposed degree of core engine interchangeable parts between Crusader and Abrams, (2) Proposed degree of Major Component interchangeable parts between Crusader and Abrams.

L.4.3 Element 2 ? Maintainability:

L.4.3.1 Factor 1 Ease of Maintenance: The Offeror shall describe the frequency and complexity of the maintenance burdens related to its proposed approach. The offeror's description should focus on its concept for developing, documenting, validating, and updating maintenance tasks throughout the Phase I development process as well as its plan for minimizing the maintenance tasks.

L.4.3.1.1 The Offeror shall provide a draft Maintenance Allocation Chart (Enclosure H, Attachment 6) in accordance with the Army's two level maintenance concept (Enclosure A, Attachment 6) to identify the anticipated scheduled and unscheduled maintenance tasks with a description of the skills and tools required to perform such tasks.

L.4.3.1.2 Predictions of matured propulsion system/power pack mean-time-to-repair (MTTR) data for each line replaceable unit and maintenance ratio (MR) predictions, in terms of maintenance man-hours per operating hour, as well as levels of repair (Unit, Direct Support, General Support). Any known or anticipated scheduled maintenance or PMCS burdens shall be documented.

L.4.3.2 Factor 2 Diagnostics/Prognostics: The offeror shall describe its overall approach for diagnostics and fault isolation including the "on-board," built-in fault isolation/diagnostic/prognostic features of the proposed approach. The offeror must address the integration of each of the sensors and signal/recorders listed in Enclosure C to Attachment 6. The offeror shall describe any development efforts required to include such features in the proposed approach and its experience developing similar features for any existing propulsion systems. The Offeror shall provide a list/description of all additional "off-board" special tools and test measurement and diagnostic equipment required to support its proposed propulsion system. The Offeror shall describe its approach to ensuring that off-board electronic diagnostics are compatible with both the Integrated Family of Test Equipment, (IFTE) and the Direct Support Electrical System Test Sets, (DSESTS).

L.4.4 Element 3 Sustainability: The concept/approach for supporting the propulsion system hardware throughout its life cycle shall be assessed based on two factors: (1) Supply Support and (2) Logistics Documentation.

L.4.4.1 Factor 1 Supply Support: The offeror shall describe its concept for meeting the spare and repair part requirements to comply with the Army's goal of 90 percent operational readiness. This description must include a discussion of the viability of the supplier base for critical components and the approach for managing obsolescence. In addition, the offeror shall describe any emerging technologies that may have applicability to the proposed solution and its approach to assess and continually insert emerging technology into the design.

L.4.4.1.1 The offeror shall describe its plan/strategy to insure standardization and interoperability, to include lubricants. The Army will assess the degree of standardization with current parts in the Army/DoD inventory as proposed in the Commonality Matrix (Para. L.4.2). The offeror shall explain the methodologies employed to determine/approximate the above parts standardization data and describe plans for maximizing commonality between components/parts and other US Army/DOD systems throughout the design and development process.

L.4.4.2 Factor 2 Logistics Documentation: The offeror shall describe the proposed approach for developing, maintaining and delivering Provisioning Technical Data, Depot Maintenance Work Requirements and Technical Publications to the Government and System Integrators. The Offerors shall describe their approach to interfacing with the systems integrators IETM efforts and a stand alone level 5 IETM for Abrams.

L.5 Contract Performance Capability Volume:

L.5.1 The Contract Performance Capability Volume should be divided into Three Sections: Section 1 is the Development and Production Capability information, Section 2 is Qualifications and Past Performance, and Section 3 is Small Business Participation.

L.5.2 Element 1 Development and Production Capability:

L.5.2.1 The offeror shall summarize its development and production plan for a propulsion system/power pack and provide a Phase I Preliminary Integrated Master Plan (IMP) and Preliminary Phase I and Phase II Integrated Master Schedule (IMS). The preliminary IMP must cover the Phase I effort through completion of Government vehicle prototype testing and be traceable to the PWBS. The preliminary IMS must cover all of the Phase I and Phase II major milestones through full-scale production. The preliminary IMP and IMS for Phase I will be included in the contract to form the baseline for the final documents that will be prepared and maintained under the contract. The preliminary IMP and IMS will be evaluated, along with the additional

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information requested below, to assess the performance capability and schedule risk.

**L.5.2.2 Factor 1 Development Plan:** The offeror shall summarize its development plan with emphasis on the proposed application of integrated process and product development (IPPD). The IMP shall describe the key program events and accomplishments/ accomplishment criteria associated with those key events identified in the IMS. The preliminary IMS must include the critical path for the completion of the entire Phase I development effort with all key milestones noted in accordance with paragraph L.5.2.4. The offeror's preliminary IMP shall generally describe the systems engineering approach that will be implemented for Phase I, and specifically highlight the following key aspects of its Phase I systems engineering approach.

**a.Modeling and Simulation:** The offeror shall describe the planned models and simulations to be used to support engine, transmission and power pack engineering development, systems engineering, specialty engineering and test. The offeror's proposal should describe how the cost-effective application of models and simulations will streamline development and increase the Government's confidence in the ability of the power pack to meet its objective requirements.

**b.Performance Metrics:** The offeror shall describe its proposed implementation of performance metrics. The offeror shall list the key technical performance measures (TPMs) and supporting technical performance parameters (TPPs) to be tracked during development. Included with the TPMs and TPPs shall be the offeror's proposed "Success Criteria" for products delivered during Phase I and proposed "Transition Criteria" for moving from Phase I to Phase II. The "Success Criteria" will define the level of performance the offeror expects the delivered products to achieve in order to declare full accomplishment of the technical effort during Phase I. The "Transition Criteria" will define the programmatic goals (i.e., technical, cost, weight, RAM) required for a low risk transition to Phase II in support of the Crusader EMD and Abrams fielding schedules.

**c.Risk Management/Metrics:** The offeror shall describe its proposed approach for managing program risk. The offeror shall identify the program technical, cost and schedule risks for hardware and software related to the key milestones noted on the critical path, their risk ranking and a general description of the risk mitigation plans proposed to reduce these risks early in the program.

**d.Cost Management/Metrics:** The offeror shall describe its proposed approach for implementing cost-as-an-independent-variable (CAIV) and its processes for managing/minimizing development, production and acquisition cost. The offeror shall establish a design-to-unit-rollaway-cost (DTURC) objective and manage to this objective throughout development. The offeror's proposal shall include its DTURC target with the projected glide-path and planned activities for achieving this glide-path and DTURC target. The mutually agreed upon DTURC will be used as part of the Life Cycle Cost award fee incentive agreement. The offeror shall describe processes to be used for managing life cycle cost (LCC) in order to minimize the Army's total ownership cost (TOC).

**e.Weight Management/Metrics.** The offeror shall describe the proposed approach for managing weight. The offeror's proposal shall include its Design-to-Weight (DTW) target with the projected glide-path and planned activities for achieving this glide-path and DTW target. The mutually agreed upon DTW will be used in the award fee incentive agreement

**f.Reliability/Maintainability/Durability Management/Metrics:** The offeror shall describe the proposed approach for managing power pack reliability/durability. The offeror's proposal shall include its RAM target with the projected glide-path and planned activities for achieving this glide-path and RAM target.

**g.Integrated Management Framework:** The offeror shall describe the technical and management processes for interfacing with the Army and the System Integrating Contractors under the contract, including plans/processes for completing the interface control document and achieving issue resolution across programs/contracts. The Army is particularly interested in the offeror's approach for managing requirements and interfaces across programs and contracts. The offeror shall describe plans/processes for maintaining requirements and interface control with Crusader and Abrams, and for managing changes to these requirements and interfaces as the system design evolves and matures. The offeror shall describe the technical and management processes for interfacing with the Army and the System Integrating Contractors to ensure that the common engine configuration is maintained. The achievement of proposed commonality and the further maximization of commonality will be used in the Award Fee Incentive Agreement.

**L.5.2.3 Factor 2 Production Capability and Depot Overhaul Plan:** The offeror shall identify prior experience transitioning high-power propulsion systems prototype designs to producible and cost reasonable production configurations. Specifically, the offeror shall discuss any experience with mass production, and the offeror's application of this experience to the ACCE Program related to production planning and facility layout for both the production facility and Government's Depot Overhaul facility at Anniston Army Depot.

**L.5.2.3.1 Production Transition:** The offeror shall assume that production will be required within North America. The offeror shall describe its approach for production transition. Within that approach the offeror shall identify whether the major components will be manufactured in existing facilities with existing tooling or if new facilities and/or tools will be required to meet production delivery requirements as specified in Enclosure B to Attachment 2. For each piece of equipment the offeror shall identify whether that equipment is currently available or will be acquired for the production under the Phase II production contract. The source and procurement leadtimes shall be provided for any additional major pieces of equipment that

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are needed to meet the Phase II production schedules.

L.5.2.3.2 Depot Overhaul Plan: The offeror shall provide a maintenance concept that should consider the use of Anniston Army Depot for repairs/overhauls of major automotive parts that are not repairable below depot level. Based on the facility and Government Furnished Equipment assumptions at Enclosure F to Attachment 6, the offeror shall identify all equipment that is required to support the approach.

L.5.2.4 Integrated Master Schedule (IMS): The offeror shall detail the critical milestones and events required to meet both the Phase I - Prototype Contract and the Phase II - Production Contract objectives. The offeror shall use the Government's production schedule and program schedule at Enclosure A and B of Attachment 2 as a guideline for development of its specific milestone schedule.

L.5.2.4.1 The Phase I portion of the IMS shall identify key program events from individual component design development, through Government acceptance of prototype hardware for vehicle integration and test and finally testing/test vehicle corrections. The Phase I IMS shall, at a minimum, individually identify the following events:

- a.System Design and Engineering milestones, including all Design Reviews
- b.Prototype fabrication
- c.Engineering Specifications suitable for procurement for long lead (supply lead time of over 90 days) prototype hardware and fabrication tooling
- d.Award long lead prototype material/tooling subcontracts
- e.Receipt of prototype long lead material/ tooling deliverables
- f.Contract component and power pack testing
- g.Vehicle integration and application
- h.System Level Test and Evaluation, including Test Readiness Reviews
- i.Completion of Logistics Data Planning and Reviews
- j.Completion of Manufacturing and Facilities Planning Development and Delivery of all Logistics Documentation, including electronic Technical Manuals
- k.Design, Procurement and Delivery of Special Tools and Test Equipment
- l.Development and procurement of initial spare parts
- m.Development of Training Documentation and Completion of Maintenance Training Devices/simulators
- n.Production Transition IPR

L.5.2.4.2 The Phase II portion of the IMS shall identify key program events to reach a production capability of 40 units per month and to have a logistics support structure in place before deliveries begin. The Phase II IMS shall identify the Phase II critical path and, at a minimum, individually identify the following events:

- a. Manufacturing facilitization
- b. Long Lead Material and Tooling Procurements including the following events:
  - 1.Complete Engineering design of component/tooling
  - 2.Development Engineering Specifications suitable for procurement
  - 3.Issue Purchase Request
  - 4.Receipt of Quotes
  - 5.Award Material/tooling subcontract
  - 6.Receipt of long lead material/ tooling deliverable
  - 7.Completion of prime contractor dressing of material/tooling
  - 8.Introduce material/tooling to production process
  - i.First Article Testing

L.5.3 Element 2 Past Performance:

L.5.3.1 Past performance consists of Past Performance Questionnaires completed by the offeror and cognizant Contracting Officer's Representative (COR), and Procuring Contracting Officer (PCO). The offeror shall distribute the Past Performance Questionnaire (attached at the end of Section L of this solicitation) and include past performance references for each contract listed in their response to paragraph L.5.3.2.3 below. In addition, the offeror shall send a copy of the Past Performance Questionnaire directly to the cognizant Contracting Officer's Representative (COR) and Procuring Contracting Officer (PCO) on the projects you and /or your subcontractors have completed during the last ten years that are in any way relevant to the effort required by this solicitation. The offeror shall request the COR and PCO complete the questionnaire. All completed questionnaires (including self-assessment) shall be forwarded to the contract specialist via email to [seeburgr@tacom.army.mil](mailto:seeburgr@tacom.army.mil) no later than ten (10) days before the due date of this solicitation. The Contracting Office will contact those offices that do not respond to the questionnaire.

L.5.3.2: Description of the Organizational Qualifications: Offeror shall describe its corporate background, knowledge and experience related to design, development, integration and production of high power propulsion systems (over 1000 hp). Describe the organization that will perform this effort.

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L.5.3.2.1 Offerors shall provide an outline of how the efforts required by this solicitation (such as design, development, integration, testing, etc) and/or major components (engine, transmission, etc) will be assigned for performance among proposed sub-contractors who will perform a significant portion of the effort. "Significant" is defined for these purposes in terms of estimated dollar amount of the subcontract and/or in terms of criticality of the subcontracted work to the whole. Offerors shall include in their proposal the written consent of their proposed subcontractors to allow the Government to discuss the subcontractor's past performance evaluation with the offeror during evaluations.

L.5.3.2.2 List previous commercial and/or military contracts, with appropriate description, that demonstrates that such corporate entities/divisions or proposed sub-contractors have performed similar efforts and provide discussion regarding accomplishment of the efforts that demonstrates subject matter knowledge. Identify whether those divisions have relocated since the accomplishment of previous contract efforts, and provide a description of any changes arising from that relocation in terms of key personnel, facilities and equipment.

L.5.3.2.3 List and describe all projects you and/or your subcontractors have completed during the last five years that are in any way relevant to the effort required by this solicitation. You may list and describe projects of a proposed subcontractor, provided you obtain a Letter of Intent to Perform from the subcontractor and the letter is included with your offer. The list shall identify:

a.Contract number and brief description of the scope of work;

b.Purchasing office (Government Agency or Commercial Firm);

.Cognizant Procuring Contracting Officer, or Purchasing Agent, Administrative Contracting Officer (ACO), Technical Representative and addresses, telephone numbers and e-mail addresses;

d.Contract type, terms and values of contracts;

e.For other than firm fixed price contracts, the estimated or target cost, and the actual experienced costs;

f.Compliance with original delivery schedule;

g.Provide a listing (annotated with the above information) of all contracts terminated or in the process of being terminated;

NOTE: Information pertaining to items a. through g. shall be provided for all proposed subcontractor(s) whose effort(s) will exceed ten percent (10%) of the basic level of effort and/or estimated cost in any one year of contract performance;

h.For each contract cited in response to the above, describe the statement of work, similarities of that work with the work required by this solicitation, objectives achieved, and cost growths or schedule delays encountered for the Government contracts which did not/do not meet original requirements with regard to either cost, schedule, or technical performance, a brief explanation of the reason(s) for such factor(s) and any corrective actions taken to avoid recurrence;

i.The offeror shall also provide all the above required information for any and all contracts it has had terminated in whole or in part, for any reason during the past five years, to include those currently in the process of such termination as well as those which are not similar to the proposed effort;

Note: Offerors are reminded that both independent data and data provided by offerors in their proposals may be used to evaluate offeror's past performance. Since the Government may not necessarily interview all of the sources provided by the offerors, it is incumbent upon the offeror to explain the relevance of the data provided. The Government does not assume the duty to search for data to cure problems it finds in proposals. The burden of providing thorough and complete past performance information remains with the offerors. Proposals that do not contain information required by this paragraph risk rejection or high risk rating by the Government.

#### L.5.4 Element 3 - Small Business Participation.

L.5.4.1 Offerors are to identify the extent to which small businesses (SBs), small disadvantaged businesses (SDBs), woman-owned small businesses (WOSBs), historically black colleges/universities or minority institutions (HBCU/MIs) and Hub Zone concerns will be utilized in the performance of this proposed contract. For small businesses, as defined by the Standard Industrial Code, as defined by the USC and the FAR, applicable to this solicitation, the offeror's own participation as a SB, SDB, WOSB, HBCU/MIs or Hub Zone concern is to be identified, and will be considered in evaluating small business participation.

L.5.4.2 The offeror is to address the following factors in detail.

a.The names of SBs, SDBs, WOSBs, HBCU/MIs or Hub Zone concerns who would participate in the proposed contract, identifying specific components to be produced or services to be performed by them, and the estimated total dollars of such work;

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b.A description of the offeror's performance, over the past three calendar years, in complying with the requirements of FAR 52.219-8, including description and available documentation of the methods employed to promote small business utilization and the internal methods used to monitor such utilization.

L.5.4.3 Offerors who are large businesses, as defined by the Standard Industrial Code applicable to this solicitation, are also to provide a description of their performance over the past three calendar years in complying with the requirements of FAR 52.219-9, including documentation of their accomplishment of the goals established under Subcontracting Plans of prior contracts. The subcontracting plan shall be submitted with the offeror's proposal. Large businesses which have never held a contract incorporating FAR 52.219-9 shall so state.

#### L.6 TOTAL OWNERSHIP COST

L.6.1 Volume V: Total Ownership Cost (TOC). The Total Ownership Cost Volume shall include the data necessary to determine the reasonableness, realism and affordability of the proposed costs. The Government will develop a most probable cost from its evaluation of the offeror's proposal. The evaluation for reasonableness, realism and most probable cost seeks to determine whether the proposed costs accurately reflect the offeror's specific technical approach. Important aspects of the cost proposal include the following:

(a) The estimated cost to the Government must reflect the use of prudent judgement and sound business practices. Sound business practices include compliance with governing acquisition regulations (FAR/DFARS) and proper estimating and accounting of costs.

(b) The estimated cost must be consistent with the offeror's technical volume. The consistency between the offeror's cost and its technical approach reflects upon the offeror's understanding of the effort and their ability to perform in accordance with the statement of work. Any inconsistency, if unexplained, raises a fundamental question as to the offeror's understanding of the effort and their ability to perform at the stated cost.

L.6.1.1 Submit the TOC Volume in electronic format. Electronic submission must use Microsoft Excel 97/95 or a file format acceptable to the Contracting Officer. Submitted spreadsheet files must contain all formulas, computations or equations used to compute the proposed amounts. Print image files or files containing only values are not acceptable.

L.6.1.2 All costs must be in U.S. dollars only, including amounts for the prime contractor and any subcontractors. If the basis for the proposal is any other currency, the offeror shall:

- (a) State the exchange rate(s) used to convert any currency to U.S. dollars.
- (b) Explain how you intend to deal with the risk that fluctuations in currency exchange rates may impact this prospective contract.

L.6.1.3 Offerors must submit a proposal that provides, at a minimum, the level of cost information for each element, and section within the element, in accordance with the instructions provided in Section L.6.4, Presentation of Cost Data.

L.6.1.4 The offeror shall be held accountable for the validity of all information supplied in their proposal. The Government does not assume the duty to search for data to cure problem areas it may find in the proposal. The burden of providing thorough and complete cost information remains with the offeror. Should subsequent investigation uncover that the facts and conditions were not as stated, the proposal may be rejected.

L.6.1.5 In addition to the copies submitted to TACOM, the offeror shall concurrently submit one (1) copy of its TOC Volume to its cognizant DCAA or DCMAO office. The offeror shall provide notification within its proposal as to which office/agency this information was sent along with a point of contact, phone number and e-mail address.

L.6.2 Proposal Structure: The instructions that follow are not intended to be restrictive or all inclusive. Offerors may submit any other cost or financial information they consider useful in the evaluation of their proposal. It is requested that the offerors comply (to the extent they can) with the Government's cost schedule format (Attachment 3/Enclosure F) to facilitate the review of the competitive proposals. Separate cost schedules must be submitted for each element and section of that element.

L.6.2.1 In regard to Element 1, Operations and Support, offerors shall submit a detailed O&S cost estimate. Elements 2 and 3 of the TOC area are consistent with the procurement's two phase approach which is discussed in the Executive Summary of the solicitation. Phase I (Element 3) covers the development, fabrication, integration, application and testing of the prototype systems along with the required logistics and technical prototype test support. The contract type for Phase 1 is Cost Plus Award Fee (CPAF). Phase 2 (Element 2) of the program will be for production and logistics support. Offerors shall submit detailed production cost estimates for each program year in accordance with the production/retrofit schedule provided in Attachment 2/Enclosure B of the solicitation. Though the estimates supplied for Element 2 (production cost estimate) are not contractually binding, they will be used, in conjunction with the developmental costs, to develop the Government's most probable cost.



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L.6.3 Element/Section Profile. The following elements and their sections comprise the TOC area of the evaluation. Offerors shall note that at the section level, costs must be identified separately (where requested) for the Abrams and Crusader programs so that appropriated funds can be properly allocated against each system's cost liability.

Element 1: Operations and Support

- Section 1: Spare and Repair Parts.
- Section 2: Petroleum, Lubricants and Oil (POL).

Element 2: Phase II Production

- Section 1: Production Costs.
- Section 2: Production Category 2 Application Work.

Element 3: Phase I Development

- Section 1: (CLIN 0001AA) Common Engine Design and Development.
- Section 2: (CLIN 0002AA) Unique Abrams Engine Design and Development.
- Section 3: (CLIN 0002AA) Abrams Prototypes.

(Note: The costs for Sections 2 and 3, combined together, represent the value for CLIN 0002AA in the contract).

- Section 4: (CLIN 0003AA) Unique Crusader Engine Design and Development.
- Section 5: (CLIN 0003AA) Crusader Prototypes.

(Note: The costs for Sections 4 and 5, combined together, represent the value for CLIN 0003AA in the contract).

- Section 6: (CLIN 0004AA) Abrams Category 2 Integration Work (Contract Option).
- Section 7: (No Contract CLIN) Abrams Category 2 Integration Work (Contract Option).

Section 8: (No Contract CLIN) Crusader Category 2 Integration Work.

L.6.4 Presentation of Cost Data. Offerors are required to submit the cost estimates and necessary data for the Government to perform its evaluation. Costs for Element 1, including their sections, shall be presented by government fiscal year in "FY00 constant" dollars. Costs for Elements 2 and 3, including their sections, shall be presented in "then-year" dollars by government fiscal year. It is important that all direct costs be presented in accordance with the offeror's Contractor Work Breakdown Structure (CWBS) in order to ensure that efforts stated in the offeror's technical, logistics and management volumes are in fact accounted for in their cost. This information shall be adequately cross-referenced, suitable for detailed analysis and traceable to the applicable section of their volume. A summary of the elements and their associated sections, along with the level of cost data that is expected to be submitted by the offeror for each element/section, is presented below.

L.6.4.1 Element 1: Operations and Support---This Element is comprised of two sections. Operations and Support costs (O&S) are incurred after deployment and, for the purposes of this solicitation, will include the cost of spare and repair parts (consumables and reparables) and petroleum, oil, and lubricants (POL). The offeror shall provide an operations and support cost estimate based on the selected operational and cost data defined in the following sections. There are two sections under this element.

Sec. 1. Spare and Repair Parts: The costs for spare and repair parts are based on failure rates and the cost per failure. Paragraph L.3.3.1.3, Reliability/Maintainability/ Durability, requests the offeror to provide failure rates at the subassembly, assembly, and subsystem levels. In order to compute the spare and repair parts cost, these failure rates shall be multiplied by the vehicle operating tempos and the vehicle densities (Attachment 3 Enclosure B) to arrive at the expected number of failures per year. The offeror must provide the average cost per failure for those subassemblies, assemblies, and subsystems which are considered cost drivers in this area (i.e., make up at least 80% of the total cost of spares and repair parts). In order to do this, the offeror must also identify whether each of these cost driving subassemblies, assemblies, and subsystems are expected to be a repairable (i.e., a failure results in the item being replaced and then the failed item is turned into the supply system to be repaired) or a consumable (a failure results in the item being replaced and the failed item is then discarded). The cost per failure for a repairable should include the cost (labor and material) to repair the item to a level whereby it can return to the supply system. In general, the cost per failure for a consumable will simply be the unit cost of the item. The offeror shall provide the prediction methodology for all estimates that are not already covered in the response to Paragraph L.3.3.1.3. In order to insure the data provided for the Spare and Repair Parts is clear and consistent, the offeror shall present the data in a table similar to the following:

Component (Cost Drivers)	Failure Rate (MTBF in hrs)	Unit Cost	Cost Per Failure	Consumable (C)/ Repairable (R)
Common Engine	Xxxx		\$xxx	\$xxx
R				

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Crusader Trans	Xxxx	\$xxx	\$xxx
R			
Subassembly 1	Xxxx	\$xxx	\$xxx
C			
Subassembly 2	Xxxx	\$xxx	\$xxx
R			
"	Xxxx	\$xxx	\$xxx
R			
"	Xxxx	\$xxx	\$xxx
C			
"	Xxxx	\$xxx	\$xxx
C			

Sec. 2: Petroleum, Oil, and Lubricants (POL). The offeror shall compute the cost of POL per fiscal year by multiplying the fuel consumption rate times the vehicle operating tempos and vehicle densities (Attachment 3 Enclosure B). The offeror shall insure that the fuel consumption rate used in this computation is consistent with the data provided in the Requirements Compliance Matrix.

L.6.4.1.1 Inflation Guidance. All costs should be expressed in FY00 constant dollars. If the offeror finds it necessary to apply inflation indices, the current OMB/OSD inflation indices provided in Attachment 3 Enclosure E should be used.

L.6.4.1.2 Net Savings and Present Value Analysis. For Abrams only, the offeror shall perform a net TOC savings and present value analysis (discounted dollars) of their proposal by the rules set forth in Attachment 3 Enclosure C. The savings to investment ratio (SIR) and payback period are defined in Attachment 3, Enclosure C.

L.6.4.2 Element 2: Phase II Production---This Element is comprised of two sections, shown as follows.

Sec. 1: Production Costs: Offerors shall provide their cost estimates, by program year, for the production engines, based on the Government's detailed production schedule provided as Attachment 2, Enclosure B. The total projected Abrams fleet requirements are 2,845 systems over 8 years, beginning in FY03. The Crusader program production requirements are 755 powerpacks over 6 years beginning in FY06. Offerors shall adhere to the CWBS structure for presenting their direct costs. The total production cost for each prototype system, by program year, shall be shown using the Government's cost schedule format (Attachment 3, Enclosure F).

Sec. 2: Production Category 2 Application Work: Offerors shall provide their cost, consistent with the CWBS structure and the Government's suggested cost schedule format, to accomplish the integration/application of the prototype system with the interfacing systems of the vehicle. This effort applies only to the Abrams system (identify separately both LATP & field application efforts); do not propose costs to perform integration/application for the Crusader system.

L.6.4.2.1 The following cost data must be provided in support of the proposed values for both sections under Element 2: Production.

Material: Provide a narrative which explains the method used to develop the material cost, including information regarding the extent to which the material cost is based on vendor quotes, purchase order history, estimates, or other means. For any material items with a per end-item (engine) value greater than \$500, provide the following additional information:

- (1) item name/description/vendor
- (2) per unit base cost and quantity used per end-item (engine)
- (3) extended cost (base unit cost multiplied by the quantity)
- (4) basis for the cost (estimate, quote, purchase order history)
- (5) indicate whether item is sole-source, competitive or commercial

Direct Labor (includes both factory and office labor): Provide the estimate of direct labor hours and dollars required to accomplish the requirement. Support related to direct labor shall include the following:

- (1) a time-phased breakout of the direct labor hours, by labor category.
- (2) a narrative description of the method used to estimate the hours, discussing the assumptions used and cost estimating relationships.
- (3) the labor wage rates applied to the hours, by labor category, including the basis for the rate and any escalation applied.

Indirect Rates: Identify the indirect rates, by category, by year, used in the development of your costs. Provide, as well, the following information, as applicable:

- (1) the effective date of the rates or the data that formed the basis for the rate and state whether or not any rate package has

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been submitted to DCAA/DCMAO for their review.

(2) a narrative explaining the basis for the rates. Specifically identify any escalation factors applied.

(3) for those rates in your proposal, provide the recorded/booked rate for the last completed accounting period (i.e. fiscal year or calendar year) and explain any variance between the previously recorded actual and what is now being used in your proposal.

(4) should your rates reflect established Forward Pricing Rates, furnish the name of the Government entity with whom these rates were negotiated and the effective date of settlement.

Other Direct Costs: Identify any Other Direct Costs (ODCs) as part of your proposal submission, consistent with your accepted accounting methodology, that will be required to accomplish the requirements under this effort and charged directly against this contract. Include a brief explanation of the purpose for these costs and their method of computation.

Contingencies/Adjustments: Identify the nature and amount of any contingencies or any upward/downward adjustments included in your proposal along with an explanation of their basis.

Profit: State the profit rate and total dollars included in your proposal.

Quantity/Production Rate Impact: Identify the impact on the production cost estimates of varying total production quantities and/or production rates. Within reason, provide a methodology for adjusting the production cost estimates to accommodate different production quantities and/or production rates.

L.6.4.3 Element 3: Phase I Development---This Element is comprised of eight sections, shown as follows.

Sec. 1: Common Engine Design and Development: Offerors shall provide their cost for the Common Engine Design and Development effort. This cost represents the common engine design and engineering services that will be shared by both the Abrams and Crusader programs. Costs shall be presented in accordance with the offeror's CWBS structure. The total cost for this section shall be presented in accordance with the Government's suggested cost schedule format (Attachment 3, Enclosure F). One total cost, combining Abrams and Crusader, is acceptable.

Sec. 2: Unique Abrams Engine Design and Development: Offerors shall provide their cost for the Unique Abrams Engine Design and Development effort. This cost represents the unique engine design and engineering services for the Abrams prototype engine. Costs shall be presented in accordance with the offeror's CWBS structure. The total cost for the unique design efforts shall be presented in accordance with the Government's suggested cost schedule format (Attachment 3, Enclosure F).

Sec. 3: Abrams Prototypes: Costs shall be provided for the fabrication and delivery of the 13 Abrams prototype systems. Identify the costs in accordance with the CWBS structure with a total cost summarized in accordance with the Government's suggested cost schedule format.

Sec. 4: Unique Crusader Engine Design and Development: Offerors shall provide their cost for the Unique Crusader Engine Design and Development effort. This cost represents the unique engine design and engineering services for the Crusader prototype engine. Costs shall be presented in accordance with the offeror's CWBS structure. The total cost for the unique design efforts shall be presented in accordance with the Government's suggested cost schedule format (Attachment 3, Enclosure F).

Sec. 5: Crusader Prototypes: Costs shall be provided for the fabrication and delivery of the 11 Crusader production prototype systems. Identify the costs in accordance with the CWBS structure with a total cost summarized in accordance with the Government's suggested cost schedule format.

Sec. 6: Abrams Category 2 Integration Work: Offerors shall provide the cost to 1) design, develop and fabricate hardware proposed under CLIN 0004AA, 2) integrate such hardware with the engines for delivery IAW the proposed schedules provided in Attachment 2 for testing and 3) design the vehicle system's interface characteristics and relationships (mechanical, electrical, hydraulic and software) between the propulsion system hardware they have furnished and any other interfacing systems on the vehicle. Offerors shall refer to Section C.1.3.4 and Attachment 1 of the solicitation package for a clearer definition of the Category 2 work. Identify costs by the CWBS structure and present the total cost in accordance with the Government's suggested cost schedule format. This cost applies only to the Abrams system.

Sec. 7: Abrams Category 2 Integration Work: Offerors shall provide the cost for the development engineering and fabrication of the vehicle and other non-engine specific hardware. It is envisioned that these costs will primarily represent all "Category 2" efforts, less any proposed by the offeror under CLIN 0004AA (Sec 6 above), for the Abrams System Integrator (GDLS) who is required to integrate the developed engine into the vehicle.

Sec. 8: Crusader Category 2 Integration Work: Offerors shall provide the cost to 1) design, develop and fabricate eleven (11) prototype transmissions, 2) integrate these transmissions with the engines for delivery IAW the proposed schedules provided in Attachment 2 for powerpack testing and 3) design the vehicle system's interface characteristics and relationships (mechanical, electrical, hydraulic and software) between the powerpack system, including transmission, with any interfacing systems on the vehicle. Identify costs by the CWBS structure and present the total cost in accordance with the Government's suggested cost

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schedule format. This cost applies only to the Crusader system.

L.6.4.3.1 The following cost data must be provided in support of the proposed amounts for all sections under Element 2: Phase I Development.

Material: Provide a narrative which explains the method used to develop the material cost, including information regarding the extent to which the material cost is based on vendor quotes, purchase order history, estimates, or other means. For any material items with a per end-item (engine) value greater than \$500, provide the following additional information:

- (1) item name/description/vendor
- (2) per unit base cost and quantity used per end-item (engine)
- (3) extended cost (base unit cost multiplied by the quantity)
- (4) basis for the cost (estimate, quote, purchase order history)
- (5) indicate whether item is sole-source, competitive or commercial

Direct Labor (includes both factory and office labor): Provide the estimate of direct labor hours and dollars required to accomplish the requirement. Support related to direct labor shall include the following:

- (1) a time-phased breakout of the direct labor hours, by labor category.
- (2) a narrative description of the method used to estimate the hours, discussing the assumptions used and cost estimating relationships.
- (3) the labor wage rates applied to the hours, by labor category, including the basis for the rate and any escalation applied.

Indirect Rates: Identify the indirect rates, by category, by year, used in the development of your costs. Provide, as well, the following information, as applicable:

- (1) the effective date of the rates or the data that formed the basis for the rate and state whether or not any rate package has been submitted to DCAA/DCMAO for their review.
- (2) a narrative explaining the basis for the rates. Specifically identify any escalation factors applied.
- (3) for those rates in your proposal, provide the recorded/booked rate for the last completed accounting period (i.e. fiscal year or calendar year) and explain any variance between the previously recorded actual and what is now being used in your proposal.
- (4) should your rates reflect established Forward Pricing Rates, furnish the name of the Government entity with whom these rates were negotiated and the effective date of settlement.

Other Direct Costs: Identify any Other Direct Costs (ODCs) as part of your proposal submission, consistent with your accepted accounting methodology, that will be required to accomplish the requirements under this effort and charged directly against this contract. Include a brief explanation of the purpose for these costs and their method of computation.

Contingencies/Adjustments: Identify the nature and amount of any contingencies or any upward/downward adjustments included in your proposal along with an explanation of their basis.

Fee: State the fee rate and total dollars included in your proposal.

L.6.4.3.2 Cost Accounting System: Provide evidence that your accounting system is capable of tracking and segregating cost data in sufficient detail to administer a cost-reimbursement type contract. This evidence may include a letter from either the DCMAO or DCAA stating that you have an acceptable accounting system for this type of contract. If you do not have a DCMAO or DCAA approved accounting system, describe what action you are taking to obtain DCMAO or DCAA approval of your accounting system prior to contract award.

L.6.5 Other Issues.

L.6.5.1 Should the common engine offered in your proposal, with some moderate degree of modification, represent a Non-Developmental Item (NDI) with previous documented sales activity, we ask that you provide a brief discussion of its price history and the volume of sales made. Indicate the major differences between those items previously sold and the unit for this acquisition, and attempt to address how those differences impact the price.

L.6.5.2 If an offeror is proposing the use of Government Furnished Equipment (GFE) on a rent-free, non-interference basis, then the offeror must provide as part of the proposal a letter from the organization controlling that equipment authorizing its use on this contract for the specific time periods involved. In addition, offerors shall provide a replacement cost value for any GFE intended to be used for this effort.

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PAST PERFORMANCE QUESTIONNAIRE

PCOs, ACOs, and Program Managers, or their Contracting Officer Representatives, are requested to complete the attached past performance questionnaire to be used in evaluating past performance. Upon completion please submit to: seeburgr@tacom.army.mil

CONTRACTOR:

CONTRACT NUMBER:

CONTRACT TYPE:

ORIGINAL CONTRACT VALUE:

CURRENT CONTRACT VALUE:

PROGRAM TITLE (brief description of work performed):

PERFORMED AS PRIME CONTRACTOR//SUBCONTRACTOR:

PERCENTAGE OF EFFORT PERFORMED AS PRIME/SUB:

Total number of man-hours worked as a prime/SUB:

NATURE OF EFFORT:

OBJECTIVES ACHIEVED TO DATE:

PERIOD OF PERFORMANCE:

PLACE OF PERFORMANCE:

KEY PERSONNEL:

Point of Contact and Telephone Number, e-mail (PM/PCO/ACO/COR):

Please complete the questionnaire. Where indicated choose the number on the scale of 1 to 4 that most accurately describes the Contractor's performance on the contract listed above. A "1" represents ALWAYS, and "4" indicates RARELY. If the question is not applicable, circle "N/A." If your answer is not ALWAYS, please add any comments and information that may help to determine the Contractor's probable performance.

1=ALWAYS            2=MOST OF THE TIME            3=SOMETIMES            4=RARELY

1. Did the Contractor comply with contractual terms and conditions?

1   2   3   4   N/A

2. Did the Contractor adhere to task schedules and mission requirements?

1   2   3   4   N/A

3. Did the Contractor demonstrate the ability to overcome program, technical, or schedule difficulties?

1   2   3   4   N/A

4. In cases where there were program, technical and/or schedule difficulties did the Contractor take corrective actions to avoid problems in the future?

1   2   3   4   N/A

5. Was the Contractor responsive to technical direction?

1   2   3   4   N/A

6. In cases where there were technical/design difficulties did the Contractor recommend an effective solution?

1   2   3   4   N/A

7. Was the Contractor responsive, reasonable and cooperative in resolving vehicle systems integration issues?

1   2   3   4   N/A

8. Did the contractor demonstrate the ability to transition from design/development phase to production/manufacturing phase without loss of schedule or increase in cost?

1   2   3   4   N/A

9. Was the Contractor's labor force adequate in terms of overall qualifications to perform the work required?

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1      2      3      4      N/A

10. Was the Contractor able to retain a stable work force for the term of the contract?

1      2      3      4      N/A

11. Did the Contractor exercise proper management control over his own personnel?

1      2      3      4      N/A

12. Did the Contractor have adequate work control procedures in place?

1      2      3      4      N/A

13. If the Contractor used subcontractor(s), did the Contractor exercise proper management control over the subcontractor(s)?

1      2      3      4      N/A

14. Was the Contractor able to solve business management problems without extensive guidance from the procuring activity counterpart?

1      2      3      4      N/A

15. Was the Contractor cooperative in resolving issues?

1      2      3      4      N/A

16. Was the Contractor responsive and reasonable with regard to negotiating changes and modifications?

1      2      3      4      N/A

17. Was the Contractor's willing and able to integrate as a team with the existing work force (Government and/or other contractors)?

1      2      3      4      N/A

18. Was Contractor's estimating system (accuracy of proposals, consistency and quality of estimates) adequate?

1      2      3      4      N/A

19. Did the Contractor's cost reporting system accurately track costs incurred? (i.e. overruns in dollars or hours)

1      2      3      4      N/A

20. Were the Contractor's logistic support efforts responsive and of good quality?

1      2      3      4      N/A

21. Does the Contractor demonstrate effective completion of their required logistics effort to prevent negative impact on the production schedule?

2      3      4      N/A

22. If the contract specified subcontracting goals, please provide copies of the completed copies SF 294 (Subcontracting Report for Individual Contracts) and SF 295 (Summary Subcontract Report) forms for the last three calendar years.

23. Have there been any terminations of tasks due to inability to meet technical requirements, delivery schedules, or cost predictions?

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YES      NO

Describe:

24. Would you award similar contracts to the Contractor in the future?

YES      NO

Why or why not?

25. What role did you play (e.g., COR, Contract Specialist, ACO)?      How long?

26. Is there anyone else you think we should contact who could assist us in evaluating the Contractor's past performance? If so, please list below.

27. Is there any other data you would like to provide that could assist us in evaluating the Contractor's past performance?

NAME (Printed)/Phone

SIGNATURE DATE

Comments:

Survey respondents shall return completed surveys directly to: [rseeburgr@tacom.army.mil](mailto:rseeburgr@tacom.army.mil) via e-mail.

\*\*\* END OF NARRATIVE L001 \*\*\*

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this address: N/A

(End of provision)

	Regulatory Cite	Title	Date
L-1	52.211-2	AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L	DEC/1999
L-2	52.214-34	SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE	APR/1991
L-3	52.214-35	SUBMISSION OF OFFERS IN U.S. CURRENCY	APR/1991
L-4	52.215-1	INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (ALTERNATE II) (OCT 1997)	FEB/2000
L-5	52.222-24	PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE REVIEW	FEB/1999
L-6	252.204-7001	COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING	AUG/1999
L-7	252.234-7000	NOTICE OF EARNED VALUE MANAGEMENT SYSTEM	MAR/1998
L-8	252.242-7006	COST/SCHEDULE STATUS REPORT PLANS	MAR/1997

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	Regulatory Cite	Title	Date
L-9	52.215-20	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (ALTERNATE III, OCT 1997)	OCT/1997

(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting officer.

(ii) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum, information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(c) Submit the cost portion of the proposal via the following electronic media: Electronic Spreadsheet format compatible with Excel 5.0 or earlier.

(End of Provision)

L-10	52.216-1	TYPE OF CONTRACT	APR/1984
The Government contemplates award of a cost plus award fee contract resulting from this solicitation.			
(End of provision)			

L-11	52.211-14	NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE	SEP/1990
Any contract awarded as a result of this solicitation will be a			
(X) DX rated order;			
( ) DO rated order			
certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor			



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will be required to follow all of the requirements of this regulation.  
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L-1252.233-2SERVICE OF PROTESTAUG/1996

(a) Protests, as defined in Section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgement of receipt from:

U.S. Army Tank-automotive and Armaments Command  
ATTN: AMSTA-AQ, Protest Coordinator  
Warren, MI 48397-5000

or

HQ, Army Materiel Command  
Office of Command Counsel  
ATTN: AMCCC-PL  
5001 Eisenhower Avenue  
Alexandria, VA 22333-0001  
Facsimile number (703) 617-5680/617-4999  
Voice number (703) 617-8176

The AMC-Level protest procedures are found at:  
  
www.amc.army.mil/amc/command\_counsel/protest/protest.html

If Internet access is not available, contact the Contracting Officer or HQ, AMC to obtain the AMC-Level Protest Procedures.

Telegraphic transmission of protest will not be authorized, unless specifically approved by the PCO.

(b) The copy of any protest shall be received in the U.S. Army Tank-automotive and Armaments Command office designated above within one day of filing a protest with the GAO.  
(End of provision)

L-1352.233-4001HQ-AMC LEVEL PROTEST PROCEDURES MAY/1998

(TACOM)

(a) Policy:

A protest to an AMC forum is a protest to the agency, within the meaning of FAR 33.103. The HQ, AMC-Level Protest Program is intended to encourage an interested party to seek resolution of its concerns within AMC, rather than filing a protest with the General Accounting Office (GAO), or other external forum.

(b) Agency Protest:

An AMC Protest may be filed with either, but not both:

1. the contracting officer designated in the solicitation for resolution of protests, or,

2. HQ, AMC at the address designated below.

(c) Election of Forum:

After an interested party protests an AMC procurement to HQ, AMC and while that protest is pending, the protestor agrees not to file a protest with the GAO, or other external forum. If the protestor has filed a protest with the GAO, or other external forum, HQ, AMC-Level protest procedures may not be used and any protest that has been filed will be dismissed.

(d) Protest Decision Authority:

The AMC Command Counsel is designated as the HQ, AMC Protest Decision Authority. In the absence of the Command Counsel, the Deputy Command Counsel is designated as the HQ, AMC Protest Decision Authority.

(e) Time for Filing a Protest:

HQ, AMC protest shall be filed in accordance with the timeframes set out in FAR 33.103(e). HQ, AMC Office Hours are 8:00 am--4:30 pm Eastern Time. Time for filing any document expires at 4:30 pm, Eastern Time on the last day on which such filing may be made.

(f) Form of Protest:

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**Name of Offeror or Contractor:**

HQ, AMC protest shall include the protestor's name, address and telephone number, including fax number; the solicitation or contract number, identity of the contracting activity and the contracting officer's name; a statement of all legal and factual grounds for protest, including copies of all relevant documents; a request for a ruling; and, a request for relief. All protests must be signed by an authorized representative of the protestor.

(g) Processing of HQ, AMC-Level Protests

(1) To file an AMC-level protest, send the protest to:

HQ Army Materiel Command  
Office of Command Counsel  
ATTN: AMCCC-PL  
5001 Eisenhower Ave.  
Alexandria, VA 22333-0001

If you have a web browser, you can use the following HTTP to view the complete AMC-level protest procedures:  
[www.amc.army.mil/amc/command\\_counsel/protest.html](http://www.amc.army.mil/amc/command_counsel/protest.html)

(2) Within 10 working days after the protest is filed, the Contracting Officer, with the assistance of legal counsel, shall file with the HQ, AMC Office of Command Counsel, ATTN: AMCCC-PL, an administrative report responsive to the protest. Reports shall be sent by facsimile, over-night mail or hand-delivered, to ensure timely receipt.

(3) The HQ, AMC Protest Decision Authority will issue a written decision within 20 working days after the filing of the protest.

(4) The written decision will be binding on the Army Materiel Command and its contracting activities.

(5) For good cause shown, the HQ, AMC Protest Decision Authority may grant extensions of time for filing the administrative report and for the issuance of the written decision. When such an extension is granted, the protestor and all interested parties shall be notified within 1 working day of the decision to grant the extension.

(h) Effect of Protest on Award and Performance:

(1) Protests before award: When a protest is filed with HQ, AMC prior to award, a contract may not be awarded unless authorized by the Assistant Deputy Chief of Staff (ADCS) for Acquisition, Contracting and Production Management, HQ, AMC, in accordance with FAR 33.103(f).

(2) Protests after award: When a protest is filed with HQ, AMC within 10 calendar days after award, or within five calendar days of debriefing for any debriefing that when requested was required by FAR 15.806, the contracting officer shall suspend performance. The HQ, AMC ADCS for Acquisition, Contracting and Production Management may authorize contract performance, notwithstanding the protest, upon a written finding that:

-- contract performance will be in the best interests of the United States; or

-- urgent and compelling circumstances that significantly affect the interests of the United States will not permit waiting for a decision from the HQ, AMC Protest Decision Authority.

(i) Remedies:

The HQ, AMC Protest Decision Authority may grant any one or combination of the following remedies:

- a. terminate the contract;
- b. re-compete the requirement;
- c. issue a new solicitation;
- d. refrain from exercising options under the contract;
- e. award a contract consistent with statute and regulation;
- f. pay appropriate costs as stated in FAR 33.102(b)(2); and
- g. such other remedies as HQ, AMC Protest Decision Authority determines necessary to correct a defect.

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L-14                      52.204-7011                      ELECTRONIC COMMERCE REQUIREMENTS                      JUL/1999  
(TACOM)

(a) Electronic Commerce requirements are specified in the clause entitled "REQUIRED USE OF ELECTRONIC COMMERCE (EC)" in Section H of this solicitation.

(b) Additional information can be obtained by sending a message to: [acqcenweb@tacom.army.mil](mailto:acqcenweb@tacom.army.mil) or by calling (810) 574-7225.

(c) Additional help is also available to small businesses from Government funded Electronic Commerce Regional Centers (ECRCs) to implement EDI. Information on ECRC is also at the following site: <http://www.ecrc.ctc.com> .

(End of provision)

L-15                      52.211-4036                      FORMAT OF THE TECHNICAL DATA PACKAGE (TDP)                      MAY/1999  
(TACOM)

(a) The TDP for the contract item is available only in electronic format via the Acquisition Center's Solicitation Webpage ([www.tacom.army.mil/acqcen](http://www.tacom.army.mil/acqcen)). TACOM-Warren has discontinued its practice of providing free hard copies (i.e. paper, CD ROM) of technical data packages (TDPs). You must obtain a copy of the TDP for this solicitation via the Acquisition Center's Solicitation Webpage. For those TDPs not available via the webpage, the TDP will be issued free of charge in CD-ROM format. The CD-ROM includes the necessary software to access, view, and print individual images that are included in the TDP. The CD-ROM can be read in any personal computer that includes a CD-ROM drive.

(b) TDPs available via the Acquisition Center's Solicitation Webpage may be purchased in CD ROM format for a fee of \$4.60 each. Requests for CD ROMs and payment should be mailed to:

USATACOM  
AMSTA-AQ-DS (TDP Requests)  
Warren, MI 48397-5000

Make checks payable to the United States Treasury. Points of Contact for this initiative: Terri McGregor at (810) 574-7058 or Rick Khouri at (810) 574-7064.

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L-16                      52.215-4003                      HANDCARRIED OFFERS - INCLUDING OFFERS DELIVERED BY EXPRESS SERVICES                      SEP/1999  
(TACOM)                      (NON-US POSTAL SERVICE MAIL)

(a) All handcarried offers must be in electronic format in accordance with the instructions contained elsewhere in Section L of this solicitation.

(b) Handcarried offers, including offers delivered by express delivery services, shall be submitted to the depository at:

US Army Tank-automotive and Armaments Command  
Acquisition Center  
Bid Lobby - Building 231, AMSTA-CM-CDD  
East 11 Mile Road  
Warren, MI. 48397-0001

(c) Offers shall not be addressed to an individual buyer. All offers must be addressed to the Bid Lobby at the above address.

(d) The external delivery envelope or wrapper must be marked with the solicitation number, the specific electronic medium on which the proposal is contained (i.e., 3 1/2" floppy disk, zip disk, CD ROM), and the date and time of the bid opening or closing. Each envelope should contain only one offer.

(e) Directions to the TACOM Bid Lobby: From Van Dyke Avenue, travel westbound on 11 Mile Road; enter the first Arsenal gate immediately west of the railroad tracks on the north side of the street. Take an immediate right and enter the parking lot of the security building. Go into the security building and ask the guard for a bid lobby pass. Exit the security building parking lot by taking a right and then an immediate left. After about 100 feet, take another left and an immediate right into the building

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231 parking lot. Find a visitor parking space and enter the building. Signs will direct you to the bid lobby.

(f) Business hours for the Bid Lobby are from 7:30 AM until 4:00 PM, Monday through Friday. All handcarried offers must be time-stamped by a Bid Lobby employee during business hours.

(g) Handcarried offers not addressed as directed above, which do not reach the Bid Lobby on time for the scheduled solicitation opening or closing, shall be determined to be late in accordance with FAR provision 52.215-1, Instructions to Offerors--Competitive Acquisitions, or FAR 52.214-7, Late Submissions, Modifications, and Withdrawals of Bids.

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L-17                      52.215-4850                      ELECTRONIC OFFERS REQUIRED IN RESPONSE TO THIS SOLICITATION                      MAR/2000

1. You must submit your offer via paperless electronic media (See Paragraph 2 below.). Offers submitted only in paper form are unacceptable (except as noted/required elsewhere in Section L of this document). You must submit your electronic offer, and any supplemental information (such as spreadsheets, backup data, and technical information), using any of the following electronic formats:

- (i) Files readable using these Microsoft\* 97 Office Products (TACOM can currently read OFFICE 97\* and lower.): Word, Excel, Powerpoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable.
- (ii) Files in Adobe PDF (Portable Document Format).
- (iii) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within your electronic offer and be accessible offline.
- (iv) Other electronic formats. Before preparing your offer in any other electronic format, please e-mail the buyer identified in Block 10 of the solicitation cover sheet (Government Standard Form 33), with e-mail copy-furnished to amsta-idg@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the buyer not later than ten calander days before the closing date. Failure to e-mail the buyer within this timeframe to seek an alternate format's acceptability may result in rejection of your offer. All alternate methods must be at no cost to the Government.

NOTE: The above formats may be submitted in compressed form using self-extracting files.

2. Acceptable media: You must submit your offer via 100 megabyte Zip\*-disk, or 3 1/2 inch disk, or 650 megabyte CD ROM, or E-mail. Identify the software application, and version, that you used to create each file submitted.
- (a) 100 MEGABYTE ZIP\*-DISK, 3 1/2 INCH DISK, OR 650 MEGABYTE CD ROM via U.S. Mail or other carrier. Offerors shall label any and all submitted disks with the solicitation number and closing date, and the offeror's name and address and contact phone number. Envelopes containing disks must be labeled per FAR 52.215-1(c), found within the provision, "Instructions to Offerors--Competitive Acquisition", listed in Section L. Your attention is also called to the entirety of that provision--all contained therein is applicable to paperless electronic offers. In the event of multiple submitted offers, place each offer/submission on its own disk(s)(one offer can comprise multiple disks). You must also submit only one offer/submission per envelope. Notwithstanding language in Block 9 of the SF 33 cover sheet of this solicitation that may state otherwise, submit ONLY ONE (1) of each disk (no additional copies required).
  - (b) E-MAIL. If you choose to use e-mail, address your offer to offers@tacom.army.mil. DO NOT E-MAIL OFFERS TO THE BUYER. THE SUBJECT LINE OF THE E-MAIL MUST READ: "OFFER--[solicitation number], [name of Company/offeror], CLOSES [closing date]". Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Any compressed files must be self-extracting, and you must provide appropriate instructions. You may use multiple e-mail messages for each offer/submission, however, you must annotate the subject lines as described above for each message, and number them in this manner: "Message 1 of 3, 2 of 3, 3 of 3".

Please select only one medium by which to transmit each offer. For instance, do not submit an offer via 100 megabyte Zip\*-disk AND e-mail.

3. Lateness rules for submitted disks or e-mail submissions are outlined in FAR 52.215-1, "Instructions to Offerors--Competitive Acquisition", listed in Section L of this solicitation. Pay particular attention to paragraph (c)(3) of that clause as it relates to the timing of submissions.
4. Security Note: If you choose to password-protect access to your offer, you must provide the password to TACOM before the closing date. Contact the buyer identified in Block 10 of the SF33 solicitation cover sheet to arrange a means of providing it. Passwords used only for the purpose of write protecting files need not be provided.
5. Electronic offers must include, as a minimum:

- (a) The SF33 cover sheet filled out. SIGNATURE: For offers submitted via disk or CD ROM per 2(a) above, this SF 33 cover sheet must be signed and included electronically in your disk or CD. Clearly label the disc/CD ROM as described in

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paragraph 2(a) above, adding the name and title of the signer authorizing your company, your company name, and then sign the LABEL itself. Authentication for e-mailed offers is verified by the offeror's return e-mail address.

(b) All applicable fill-in provisions from Sections A, B, F, and K of this solicitation. Also, Section E provision filled in (if applicable): Inspection Point: Origin, TACOM clause 52.246-4028. All applicable fill-ins must be completed and submitted by the offeror.

(c) A statement of agreement to all the terms, conditions, and provisions of this solicitation.

(d) Any other information required by the solicitation.

6. Please see FAR 15.207(c) for a description of the steps the Government shall take with regard to unreadable offers.

7. Offerors shall make every effort to ensure that their offer is virus-free. Offers (or portions thereof) submitted which DO reflect the presence of a virus, or which are otherwise rendered unreadable by damage in either physical or electronic transit, shall be treated as "unreadable" per paragraph 6 above.

\*Registered trademark

[End of provision]

L-18                      52.219-4003                      HELP FOR SMALL, DISADVANTAGED AND WOMAN-OWNED FIRMS                      JUN/1997  
(TACOM)

(a) Procurement Technical Assistance Centers (PTACs).

The Federal Government has established over 100 PTACs around the nation to help small vendors do business with the Defense Department and other Government agencies. PTACs offer most of their services FREE OF CHARGE.

(b) PTACs provide their clients with...

- marketing advice
- information on sales opportunities and partnering prospects
- help with preparing offers
- matching your firm's services and products to Government requirements
- copies of Government specifications (sometimes for a fee)
- post-award guidance
- referrals to other business assistance resources
- newsletters, which typically discuss Government policy changes and upcoming seminars and trade fairs

(c) To find the PTAC nearest you, visit [www.fedmarket.com/tecassis.html](http://www.fedmarket.com/tecassis.html) on the World Wide Web.

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L-19                      52.219-4005                      SUBMISSION OF SUBCONTRACTING PLAN                      FEB/1999  
(TACOM)

(a) Please refer to FAR 52.219-9, SMALL BUSINESS AND SMALL DISADVANTAGED BUSINESS SUBCONTRACTING PLAN, which is incorporated by reference in Section I of this solicitation. The clause requires large businesses to submit a subcontracting plan for small and small disadvantaged business concerns. Such plans are not required from offerors that are small businesses.

(b) TACOM will require a copy of such subcontracting plan. Large businesses may submit a copy of their plans (i) as an attachment to their offer in response to this solicitation; or (ii) after the bid opening/proposal closing date, in response to the Government's telephonic request (in which case the copy must be provided within five workdays of the date of the request). The plan will be submitted to the buyer's e-mail address on the face page of the solicitation.

(c) As the offeror, you need to mark each page of your subcontracting plan with the solicitation number and date. If this is a negotiated acquisition, we reserve the right to negotiate any and all elements of the proposed plan during negotiation of cost, technical, and/or managerial features of the proposal. We also reserve the right in negotiated acquisitions to discuss the subcontracting plan after receipt of any best and final offer, in which case such discussion shall not constitute a re-opening of negotiations.

(d) Failure to submit and, if applicable, negotiate an acceptable subcontracting plan which, in the judgment of the Contracting Officer, provides the maximum practicable opportunity for small business and small disadvantaged business concerns to participate in the awarded contract shall render the offeror ineligible for award. In this connection, offerors should be aware of the statutory goal that has been placed on the Department of Defense to award five percent of its total planned subcontracting dollars to small disadvantaged businesses (to include Historically Black Colleges and Universities and Minority Institutions) at the prime contract and subcontract levels. In view of this Congressional mandate, large businesses shall provide specific explanation as a part of any written subcontracting plan furnished in response to this solicitation/contract that identifies a goal for subcontracting to small disadvantaged business concerns and/or Historically Black Colleges and Universities and/or

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Minority Institutions that, in the aggregate, amounts to less than five percent of the bid or proposal's total subcontracting dollars.

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L-20                      52.233-4000                      NOTICE REGARDING TACOM OMBUDSPERSON AND AMC-LEVEL PROTEST PROGRAM                      AUG/1999  
(TACOM)

(a) We have an Ombudsperson Office here at the U.S. Army Tank-automotive and Armaments Command (TACOM). Its purpose is to open another channel of communication with TACOM contractors.

- (b) If you think that this solicitation:
1. has inappropriate requirements; or
  2. needs streamlining; or
  3. should be changed

you should first contact the buyer or the Procurement Contracting Officer (PCO).

(c) The buyer's name, phone number and address are on the cover page of this solicitation.

(d) If the buyer or PCO doesn't respond to the problem to your satisfaction, or if you want to make comments anonymously, you can contact the Ombudsperson's Office. Our Ombudsperson is Ms. LaRuth Shepherd. Her address, e-mail and phone number are:

U.S. Army TACOM  
AMSTA-CM-PY (Ms. Shepherd)  
Warren, MI 48397-5000

shepher1@cc.tacom.army.mil

(810) 574-6597 or 6547

- (e) If you contact Ms. Shepherd, please give her the following information
1. TACOM solicitation number;
  2. Name of PCO;
  3. Problem description;
  4. Summary of your discussions with the buyer/PCO.

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SECTION M - EVALUATION FACTORS FOR AWARD

M.1 Introduction:

M.1.1 Selection of the successful offeror will be based upon a comprehensive evaluation to determine the source whose proposal provides the best overall value to the Army using source selection "trade-off" procedures. The selection will be based on a comprehensive evaluation to determine the source whose proposal is considered the best value to satisfy the Government requirements and objectives at a reasonable, realistic and affordable cost. The Government reserves the right to make no award as a result of the solicitation if, upon evaluation of proposals, no proposals are deemed likely to meet the technical requirements at an acceptable level of risk and/or cost. Also the Government reserves the right to award a contract based on initial offers, with no discussions, unless the contracting officer otherwise determines discussions are in the best interest of the Government. In the event that discussions are considered necessary, offeror’s responses to Government Items for Discussion/Consideration shall be in writing.

M.1.2 Selection of the successful offeror shall be based on the evaluation of the information requested in Section L against the criteria stated below. Proposals which merely offer to perform work in accordance with the Solicitation, or which fail to present more than an indication of capability or compliance with the technical requirements without elaboration shall be deemed unacceptable and shall not be considered further. Any proposal which is unrealistic in terms of technical and schedule commitments, or unrealistically high or low in cost, will be deemed reflective of an inherent lack of competence or indicative of a failure to comprehend the complexity and risks of the Army’s requirements as set forth in the solicitation and may be grounds for rejection of the proposal. Furthermore, any significant inconsistency between proposed performance and cost, if unexplained, may be grounds for rejection of a proposal due to an offeror’s misunderstanding of the work required or his ability to perform any resultant agreement.

M.1.3 The evaluation criteria are comprised of four areas: (1) Technical, (2) Logistics (3) Performance Capability, (4) Total Ownership Cost. Of the four areas, Technical and Total Ownership Cost are most important and equal to each other. Each is slightly more important than Logistics, which is more important than Performance Capability. The Technical, Logistics, and Performance Capability Areas, when combined, are more important than Total Ownership cost.

M.2 Reserved

M.3 Technical Area

M.3.1 Under the Technical Area, the Army will evaluate the merits and risk of the propulsion system solution based on its impact on overall vehicle performance when integrated in each vehicle across the required environmental spectrum. The Technical Area is divided into three elements: "Size and Weight", "Propulsion System Performance", and "Propulsion System Integration". The "Size and Weight" element is more important than either the "Propulsion System Performance" or "Propulsion System Integration" elements. The "Propulsion System Performance" and "Propulsion System Integration" elements are equally weighted.

M.3.1.1 "Technical Risk" will be measured in terms of the level of risk that the offeror’s technical approach will satisfy the Army’s performance requirements and objectives based on; (1) The feasibility and practicality of the approach, (2) The realism of the approach, including how clearly and credibly it is supported, and (3) The maturity of the design solution.

M.3.1.2 "Technical Merit" will be measured in terms of the advantages and disadvantages of each approach. An "advantage" is any distinguishing feature of an offeror’s technical proposal that reflects an outstanding characteristic that is likely to result in superior performance, such as performance above minimum requirements, which will result in a consequential benefit to the Army. A "disadvantage" is any distinguishing feature of an offeror’s proposal that reflects a negative characteristic of meaningful concern, which is likely to result in unfavorable performance.

M.3.1.3 It is incumbent upon the offerors to clearly demonstrate that they can achieve any advantageous characteristics (which will be included in the model agreement) with no more than moderate risk in order to receive additional credit for that characteristic. Furthermore, in order to receive additional credit for any advantageous characteristic, attainment of such characteristics must not otherwise increase the risk of any other evaluation element above a moderate level.

M.3.2 Element - 1 Size and Weight: Under this element the Army will evaluate the (1) feasibility/achievability, the technical risk and the technical merit of the proposed power pack, including all ancillary items that are contained within the engine compartment, to fit the space allowances specified in Enclosures A and F to Attachment 5 and, (2) the offeror’s design to weight objective for the power pack and the proposed approach for weight to assess the achievability of the proposed weight objective and the technical risk and the technical merit of the proposed approach in meeting the Government’s maximum vehicle weight requirements as specified in Attachment 5, Enclosure E for Abrams and Enclosure F for Crusader. For Abrams, the proposed propulsion system solution, when integrated with all associated subsystems shall not exceed the total weight of 16,762 lbs as shown in Attachment 5, Enclosure C.5 when the engine and all other subsystems or components displaced from the vehicle are considered. For Crusader, the wet weight of the engine, transmission, complete cooling system and a full load of fuel, as specified in Enclosure F (paragraph 3.2.2.2.1) of Attachment 5, shall not exceed 10,000 lbs.

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M.3.3 Element 2 Propulsion System Performance - The offeror's proposed approach to meeting overall automotive performance and all other system power requirements (e.g. Abrams Gun Turret Drive, Crusader Re-Supply Operations, Electrical Power and Nuclear, Biological and Chemical System) will be evaluated to assess the technical risk and the technical merit of the offeror's proposed solution for achieving vehicle system mobility performance requirements specified in Enclosures E and F of Attachment 5, for Abrams and Crusader respectively. The Performance mobility element is divided into two factors: (1) "Threshold Requirements" and (2) "Objective Requirements". The "Threshold Requirements" are more important than the "Objective Requirements" and are not subject to trade-offs.

M.3.3.1 Factor 1 Threshold Requirements: The offeror's proposed approach to meeting automotive performance and other system power requirements will be evaluated to assess the technical risk and the technical merit of the offeror's proposed solution for achieving the threshold requirements for Abrams in Enclosures E to Attachment 5 specified as Mobility System Function (para 1.0), Idle Fuel Consumption (para 1.1.1), Cruising Range (para 1.1.2), Steering and Braking (para 1.1.3), Sustained Speeds (para 1.1.4), Tractive Effort Cooling (para 1.1.5), Starting (para 1.1.6), Fording (48") (para 1.1.7), NBC System Air Requirement (para 1.1.8), Physical Requirements (para 1.2), Induced Environment (para 1.3), Transportability (para 1.4), Engine Controls (para 1.5), Durability (para 1.6), and Reliability (para 1.7). The Threshold Requirements for Crusader are in Enclosure F to Attachment 5 specified as Speed on Grade (para 3.2.1.1.4), Survivability Move (para 3.2.1.3.1), Steering and Braking (para 3.2.1.2), Cooling (para 3.2.1.3.5) and Towing Another Vehicle (para 3.2.1.3.6).

M.3.3.2 Factor 2 Objective Requirements: The offeror's proposed approach to meeting automotive performance and other mission requirements will be evaluated to assess the technical risk and the technical merit for the offeror's solution for achieving the proposed level of performance for the objective requirements specified in enclosures E and F of Attachment 5, for Abrams and Crusader respectively. As part of the assessment of objective requirements, the Army will assess the technical risk and the technical merit of the offeror's design solution for: powering the Abrams hydraulic system, Abrams electrical power generation, providing continuous clean air to the Abrams engine, the Abrams propulsion system lubrication design, and supplying compressed air to the existing Abrams NBC system. In addition, the Army will consider the trade-off justifications for any proposed changes in the objective performance requirements. While the offeror is expected to propose a solution that fully meets the specification, the Government is interested in acquiring a best-value solution that balances performance, cost, schedule and associated risks. Therefore, the Government will consider performance trade-offs for objective requirements only if the offeror clearly substantiates the offsetting benefits to the Government. The offeror is cautioned that any proposed performance trade-off must have compelling performance improvements in other areas, significant cost benefits and/or significant schedule benefits to be considered desirable by the Government. Any trade-off proposed by the offeror shall be accompanied by a trade-off analysis that provides rationale for the proposed trade-off and clearly substantiates the benefits to the Government. If the Government determines that the performance trade-off does not provide a meaningful offsetting benefit or is high risk, the offeror's proposed trade-off may be rated as a disadvantage.

M.3.4 Element 3 Propulsion System Integration: The offeror's approach will be evaluated to assess technical risk and the technical merit of the vehicle integration requirements related to the degree, complexity, and impact of the changes to the vehicle at the system and subsystem levels for each vehicle, and the ease of application for Abrams in a field modification scenario described in Enclosure D to Attachment 6.

**M.4 Logistics Area**

Under this area the Army will assess the supportability of the proposed solution. The Logistics Area is divided into three elements: (1) Commonality, (2) Maintainability, and (3) Sustainability. The "Commonality" element is significantly more important than the equally weighted "Maintainability" and "Sustainability" elements.

M.4.1 Element 1 Commonality: The proposals will be evaluated to assess the extent and merit of Abrams - Crusader Commonality. The Army will consider: (1) the degree of interchangeability of major engine components whereby more credit will be given to engine solutions that have interchangeability at higher component assembly levels, through the core engine itself, and (2) the degree to which the proposed interchangeability provides operational benefits to the using unit in terms of ease of maintenance and reduced ASLs.

M.4.2 Element 2 Maintainability: The Maintainability element is divided into two equally weighted factors (1) Ease of Maintenance and (2) Diagnostics/Prognostics.

M.4.2.1 Factor 1 Ease of Maintenance: The Offeror's approach to performing maintenance tasks will be evaluated to assess the ease, frequency, complexity, and tools required to perform each maintenance task.

M.4.2.2 Factor 2 - Diagnostics/Prognostics: The Offeror's proposed approach to develop and maximize the built in fault isolations/diagnostic/prognostics capability of the propulsion system and minimizing the need for stand alone test /diagnostic equipment and special tools will be evaluated to assess the merits of the approach and the feasibility of achieving the stated performance. The offeror's proposed approach for off-board diagnostics of electronic components will be evaluated to the extent that is compatible with both the Integrated Family of Test Equipment (IFTE); (Crusader) and the Direct Support Electrical System Test Set (DSEST); (Abrams).



<p style="text-align: center;"><b>CONTINUATION SHEET</b></p>	<p style="text-align: center;"><b>Reference No. of Document Being Continued</b></p> <p style="text-align: center;">PIIN/SIIN DAAE07-00-R-N061      MOD/AMD</p>	<p style="text-align: center;"><b>Page 97 of 99</b></p> <p style="text-align: center;">REPRINT</p>
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**Name of Offeror or Contractor:**

M.4.3 Element 3 Sustainability The Sustainability Element is divided into two factors (1) Supply Support and (2) Logistics Documentation. The "Supply Support" factor is more important than the "Logistics Documentation" factor

M.4.3.1 Factor 1 Supply Support. The Army will assess the offeror's proposed approach to meeting the spare and repair part support requirements to comply with the Army's readiness goals, the viability of the supplier base for critical components, and the approach for managing obsolescence. In addition, the Army will assess the offeror's approach to inserting any emerging technologies that may have applicability to the proposed solution and the degree of parts standardization and interchangeability with parts in the Army/DoD Supply System.

M.4.3.2 Factor 2 - Logistics Documentation: The Offeror's proposed approach to integrating and interfacing with the existing standard Army Logistic System and system integrators to include the approach to developing, maintaining and delivering Provisioning Technical Data, Depot Maintenance Work Requirements and Technical Publications shall be evaluated to assess the merits of the approach and the risk of achieving these requirements.

M.5 Performance Capability Area:

M.5.1 Under this area the Army will assess schedule risk and offeror's likelihood of success in performing the solicitation's requirements as indicated by the extent of the offeror's record of past performance, and the organizational and management capabilities

M.5.2 The Performance Capability area includes three elements: (1) "Development and Production Capability" (2) "Past Performance", (3) "Small Business Participation". The "Development and Production Capability" element is most important and significantly more than the "Past Performance" element which is more important than the "Small Business Participation" Element.

M.5.3 Element 1: Development and Production Capability: The Army will assess the risk, merit and realism of the offeror's proposed development, and production approach. The assessment will include the preliminary IMP and preliminary IMS. The preliminary IMP and preliminary IMS will be included in the model contract. The Army will consider the following equally weighted factors: (1) Phase I Development Capability and (2) Phase II Production Capability.

M.5.3.1 Factor 1 Phase I Development Capability: The Army will assess the merit, completeness, realism and risk of the offeror's proposed systems engineering processes as proposed in the preliminary IMP, including performance metrics; risk management and metrics; cost management and metrics; weight management and metrics; reliability/durability management and metrics, software management; and modeling and simulation. The Army will assess the offeror's technical and management processes for interfacing with the Army and the System Integrating Contractors under the contract. In addition, the critical path reflected in the proposed IMS will be evaluated to assess the achievability of the offeror's critical path milestones to meet desired development schedule requirements specified in Enclosure A to Attachment 2, whereby more credit will be given to engine solutions that best meet the desired development and testing schedules specified in Attachment 2.

M.5.3.2 Factor 2: Phase II Production Capability and Depot Overhaul Plan: The evaluation will assess the merit, risk and realism of the offeror's process for building of production hardware and establishing a depot overhaul relationship, including facilitization, at Anniston Army Depot. In addition, the critical path reflected in the IMS will be evaluated to assess the achievability of the offeror's critical path milestones to meet production and depot overhaul requirements at Anniston Army Depot.

M.5.4 Element 2- Past Performance: An independent group of evaluators called the Performance Risk Assessment Group (PRAG) will assess the extent of the offerors qualifications and the quality of the offeror's past performance, and the qualifications and past performance of proposed subcontractors to assess the level of risk related to successful accomplishment of this effort. An offeror's qualification is based on the degree of relevant corporate background, knowledge, and experience related to designing developing, and producing high power propulsion systems (over 1000 hp). The Army will focus its inquiry on all aspects of contract performance, including technical performance, delivery schedule conformance, contract overruns, and the Offeror's general history of cooperative behavior and commitment toward customer satisfaction. A significant achievement, problem, or lack of relevant past performance data in any aspect of the offeror's prior performance can become an important consideration in the source selection process. A negative finding under any aspect of past of past performance may result in an unfavorable risk rating. Therefore, offerors are reminded to include all relevant past efforts, including demonstrated corrective action, in their proposal.

M.5.5 Element 3: Small Business Participation: The Government will evaluate the extent to which offerors identify, and commit to utilizing, SBs, SDBs, WOSBs, HBCU/MIs and Hub Zone concerns in the performance of the contract. Such utilization may be as the prime contractor or a subcontractor, or as a member of a joint venture or teaming arrangement. The evaluation will include the following:

(1) The extent to which the proposal specifically identifies SBs, SDBs, WOSBs, HBCU/MIs and Hub Zone concerns and the estimated dollar value of their participation, including the participation of the offeror, if it is a SBs, SDBs, WOSBs, HBCU/MIs or Hub Zone concerns;

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(2) The complexity of the items/services to be furnished by SBs, SDBs, WOSBs HBCU/MIS and Hub Zone concerns;

(3) The extent of participation of such concerns in terms of the value of the total contract amount; and

(4) An assessment of the risk, based upon past performance, of the offeror actually achieving the involvement of small business concerns as proposed. Such assessment will include:

a. For all offerors, an evaluation of performance over the past three calendar years in complying with the requirements of FAR 52.219-8, Utilization of Small Business and Small Disadvantaged Business Concerns;

b. For offerors who are large businesses as defined by the Standard Industrial Code applicable to this solicitation, an additional evaluation of past performance over the last three calendar years in complying with the requirements of FAR 52.219-9, Small Business and Small Disadvantaged Business Subcontracting Plan. Where a large business has not held a contract that included 52.219-9, its prior performance will be evaluated against 52.219-8 only

#### M.6 Total Ownership Cost

M.6.1 The evaluation of proposals submitted in response to this solicitation shall be conducted on a best value basis utilizing the tradeoff process. The tradeoff process provides the Government the flexibility to select the best value, which may not always be the lowest priced proposal. As part of the best value determination, the relative advantages and disadvantages, along with the merits and risks of each proposal, shall be considered in selecting the offer which represents the best value to the Government.

M.6.2 The Total Ownership Cost Area consists of three elements: (1) Operations and Support Cost, (2) Phase II Production and (3) Phase I Development Cost. Operations and Support Cost is slightly more important than Phase II Production Cost which is slightly more important than Phase I Development Cost. The evaluation of Total Ownership Cost Area will result in an assessment of reasonableness, realism, affordability and risk. The Government will develop, from its assessment of the data submitted by the offeror, a most probable cost by adding together the most probable Operations and Support Cost, Development Cost and Production Cost for each vehicle (e.g. Abrams and Crusader) to compute a most probable Total Ownership Cost.

M.6.3 In addition to the above, the total ownership cost for Abrams will be further assessed at the Area Level in terms of a Net Savings, Present Value (discounted dollars), Savings to Investment Ratio (SIR) and payback period as explained in Attachment 3, Enclosure C. The purpose of this evaluation is to assess magnitude of the proposed Abrams O&S cost savings, the realism, and the degree of confidence in achieving significant total ownership cost reductions for Abrams. In the event that TOC between two or more proposals are considered essentially equal, the above calculations will be used as discriminating considerations.

M.6.4 Element 1: Operations and Support Cost. This element consists of two sections (reference Section L.6.4.1). The combined total assessed value of both sections represents the most probable cost for Element 1. An assessment of reasonableness, realism and risk will be determined at the element level.

M.6.5 Element 2: Phase II Production. This element consists of two sections (reference Section L.6.4.2). The combined total assessed value of both sections represents the most probable cost for Element 3. An assessment of reasonableness, realism and affordability will be determined at the element level.

M.6.6 Element 3: Phase I Development. This element consists of eight sections (reference Section L.6.4.3). The combined total assessed value of all eight sections represents the most probable cost for Element 2. An assessment of reasonableness, realism and affordability will be determined at the element level.

M.6.7 Offerors are cautioned that their costs must be fair and reasonable, balanced and consistent with their technical approach. Any offer failing to meet this criteria may be rejected. An unbalanced offer is one where the costs are significantly high or low for one given period versus another period. Offerors must demonstrate a direct relationship between the effort expended and its cost. Any significant inconsistency, if unexplained, raises a fundamental question as to the offeror's understanding of the work required and to their ability to perform the contract at the stated cost.

M.6.8 Cost may be controlling in circumstances where (a) two or more proposals are otherwise judged equal in all other areas; (b) the non-cost advantages of a particular proposal are deemed not worthy of the additional cost involved or (c) a superior proposal is at a price the Government cannot afford. The Government will select for award the offeror whose proposal presents the best overall value to the Government.

Name of Offeror or Contractor:

	<u>Regulatory Cite</u>	<u>Title</u>	<u>Date</u>
M-1	52.246-4039 (TACOM)	PRICE EVALUATION FACTOR: SUBSTITUTION OR DELETION OF GOVERNMENT QUALITY TESTING	FEB/1998
<p>(a) Per the Section E clause, <u>Substituting Commercial Test Results for Required Contract Tests</u>, you may request that we (i) delete all or some of the Government or contractor conducted tests required by the contract resulting from this solicitation; or (ii) substitute commercial testing procedures for specific Government requirements.</p> <p>(b) Please note that the price you enter in Section B of this solicitation must include all testing requirements which are included in the item's technical data package or specifications.</p> <p>(c) Along with your request for deletion or substitution, you may submit an alternate price, which reflects the price you would charge for contract items if you manufacture them without the specific testing requirements.</p> <p>(d) If we approve your request to delete test requirements or substitute commercial testing procedures, we will evaluate your offer at the alternate price submitted with your request. If you don't submit an alternate price with your request, we'll evaluate your offer at the price you indicated in Section B of the solicitation. No adjustments will be made to the price after contract award.</p> <p>***</p>			

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## SECTION A - SUPPLEMENTAL INFORMATION

AUTO/CHANGE AS6047 TACOM 01-MAR-98 EXECUTIVE SUMMARY - COST-TYPE SOLICITATION

(a) Background and Description of Acquisition:

## General:

This solicitation requests proposals for the development phase of the Abrams Crusader Common Engine (ACCE) Program. The Army is seeking a new Abrams Tank propulsion system and a Crusader Artillery System power pack that employ, at a minimum, a common engine. Although commonality in manufacturing offers desirable economies, the primary goal of commonality is to reduce maintenance and support burdens of our Soldiers in the field.

The Government desires Abrams and Crusader solutions that not only address the common Abrams-Crusader engine, but also detail system integration, two-level maintenance procedures, supply approaches, field modification strategies, and other innovations that yield a robust, affordable, and supportable program at acceptable risk. The Government is providing offerors program level cost, schedule, and performance objectives for each system. Proposals will describe an approach and corresponding contract scope of work that provide the means for the Army to achieve its overall program objectives. The Army will evaluate the contribution of each proposal towards those objectives and select the approach that can realistically provide the best overall value.

Although the Army will evaluate each approach on its ability to achieve the overall program objectives, the initial contract award resulting from this RFP will be for development of the common engine for Abrams and Crusader. In addition, at the Government's option, this contract may also award development and integration for the balance of the Abrams propulsion system. However, for Crusader the Army's intent is for the balance of the power pack development to be contracted through UDLP with a directed subcontract for transmission development to the offeror selected in response to this RFP.

In order to achieve Abrams Tank Operations and Support (O&S) cost savings, the ease and cost of field application for Abrams will be critical design parameters. For Abrams, all tanks going through production, retrofit, or overhaul at the Lima Army Tank Plant (LATP) will receive the new propulsion system at LATP. These numbers are inadequate to proliferate the new propulsion system quickly enough to yield sufficient O&S cost savings; therefore, field applications of this propulsion system modification will also be required. The offeror should plan to apply their solution with the minimal unit disruption, using contractor labor, and tools and machinery available at a typical Army General Support maintenance facility (or commercial equivalent) in the vicinity of the unit. For Crusader, the offeror will assume that all Crusader power packs will be installed during production in a contractor operated production facility.

## Program Objectives:

The Army's primary program objectives are to develop a propulsion system/power pack solution which:

- a. Significantly reduces the Operations and Support (O&S) cost burden of the Abrams Tank equipped with the existing AGT 1500 engine. The Army specifically established a long-term funding stream for the development, integration, production, and application of an Abrams Tank Propulsion System solution targeted at reducing the O&S burden of the existing system by obtaining a significant net savings.
- b. Significantly contributes to the Crusader system weight reduction requirements. The Army mandated design changes to make the Crusader Artillery System significantly lighter and smaller to improve its deployability and applicability to the Army's new vision. Since the weight of the power pack is a primary driver in reducing the overall system weight, the goal of the Crusader program is to achieve a total "wet weight" of the engine, transmission, cooling system and on-board fuel of 8500 lbs as described at Attachment 5, Enclosure F, para. 3.2.2.2.1. Proposed solutions which exceed the weight of 10,000 lbs., will not be considered.
- c. Includes an engine that optimizes commonality between the Abrams and Crusader systems. The optimum common solution will maximize the operational and logistics benefit to the war-fighter. Such benefits include fewer and interchangeable Authorized Stock List (ASL) items, common training, common Test and Measurement Devices, etc.
- d. Leverages commercial/military technologies to provide a low risk transition to production. The Army does not have the budget or the time to implement a traditional full scale development effort. Therefore, the Army is not seeking solutions that push the technological envelope at the expense of production risk.

## Program Phases:

The Army will execute the ACCE Program in two phases. The first phase will be for the development, fabrication,

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integration, application and testing of prototype systems, along with the required logistics, technical, and prototype test support. The goal of Phase I is to prove-out the integration, ease of application, performance and reliability of the propulsion system/power pack design against the specification and vehicle system level mobility requirements prior to a production commitment.

The second phase of the program will be for production and logistic support. The total projected future Abrams fleet requirement is approximately 2,845 units over 8 years, beginning in FY03. The Crusader program intends to acquire units for follow-on Engineering Manufacturing Development (EMD) (estimated at 18 units beginning in FY03), and production (estimated at 755 units over 6 years beginning in FY06). The detailed production schedules are at Attachment 2 of the solicitation.

To encourage creativity and innovation, offerors will be given wide degree of latitude to propose solutions that can best balance the Army's objectives for O&S savings, weight reduction, and commonality, while satisfying the technical performance requirements at an acceptable level of risk. The Government will evaluate the risks, merits and costs of each offeror's proposal considering its total impact to the Army.

The Government intends to only award Phase I of the program under this action. Offerors should read Attachment 1; "Acquisition Process", for a more detailed account of the Army's acquisition strategy for award of Phase I before continuing into this solicitation package.

NOTE: DISTRIBUTION STATEMENT D

Distribution of data is authorized to the Department of Defense and U.S. D.O.D contractors only. Only contractors who have been approved to receive Distribution D material will be authorized to obtain the CD-ROM attachments for this solicitation. This determination was made on 01 July 1999. Other requests shall be referred to USA TACOM, AMSTA-LC-CAPA (Mr. Seeburger), Warren , MI 48397-5000

WARNING: This document contains technical data whose export is restricted by the Arms Export Control Act (Title22, U.S.C. Sec 2751 et seq.) or the Export Administration Act of 1979, as amended , Title 50, U.S.C., App. 2401 et seq. Violations of these export laws are subject to severe criminal penalties. Dissemination in accordance with provisions of D.O.D. Directive 5230.25.

(b) NOTICE REGARDING FILL-INS:

Please note that this solicitation contains several clauses and provisions that require you to complete a fill-in or representation. If you don't complete these fill-ins, your offer may be determined ineligible for award. So please be careful to read and complete each such clause and provision.

NOTICE REGARDING CAGE CODE:

DFARS provision 252.204-7001 requires you to include your Commercial and Government Entity (CAGE) code in Block 15A on page one (1) of this solicitation, along with your name and address. If it will not fit in the space provided in block 15A please insert it here: \_\_\_\_\_.

(c) Other Key Features or Requirements of This Solicitation:

(1) Required Copies in Response to This Solicitation:

To be considered for award, you must return one signed original of your offer, completed and properly executed, by the time and date shown in Block 9 of the Standard Form 33 (SF33).

(2) Notice Regarding Handcarried Offers:

In addition, please be sure to follow the instructions in the provision entitled HANDCARRIED OFFERS - INCLUDING OFFERS DELIVERED BY EXPRESS DELIVERY SERVICES (NON-U.S. POSTAL SERVICE MAIL) in Section L. Offers MUST identify this solicitation number on the face of the mailing or delivery wrapper, and MUST be addressed to Bid Opening (AMSTA-AQ-DSAB), NOT to the buyer.

(3) Notice of 9-Digit ZIP Code:

Please note that the TACOM Bid Opening Office has been assigned a special 9-digit ZIP code of 48397-0001. This 9-digit ZIP code applies only for correspondence and bids/offers addressed to Bid Opening (Block 8 of SF33). Correspondence addressed to any other office at TACOM should cite TACOM's regular 9-digit ZIP code of 48397-5000.

(4) Required Notification to Subcontractors:

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If awarded the contract, you should advise all potential suppliers and subcontractors of the DO/DX Rating assigned to orders resulting from your subcontracts. The Rating can be found next to Block 1 on the first line of the SF33.

(5) Acknowledgment of Amendments:

Please acknowledge any amendments to this solicitation in the space provided in Block 14 of the SF33. Include the number and date of each amendment. Acknowledgment of all amendments received is important because failure to do so may make your offer ineligible for award.

(6) Question/Problem Resolution:

Questions regarding this solicitation should be directed to the buyer identified in Block 10 of the SF33.

(d) Inconsistencies Between the Executive Summary and the Solicitation:

This executive summary has been prepared as an aid to you, the potential offeror. We have made every attempt to accurately reflect the requirements and information contained in the balance of this solicitation. However, if you find any inconsistency between this executive summary and the solicitation, please contact the buyer identified in Block 10 of the SF33.

(End)

AUTO	AS7311	52.204-4006 (TACOM)	01-APR-99	TACOM'S ACQUISITION CENTER HOME PAGE ON THE WORLD-WIDE WEB
AUTO	AS7101	52.204-4007 (TACOM)	01-JUL-99	EXECUTIVE SUMMARY--REQUIRED USE OF ELECTRONIC COMMERCE
ADDED	AS7004	52.247-4020 (TACOM)	01-FEB-98	NOTICE -- FAR FOB ORIGIN CLAUSE
AUTO/CHANGE	AS7854	52.215-4854	01-APR-99	PAPERLESS ELECTRONIC RESPONSES REQUIRED IN RESPONSE TO THIS SOLICITATION/REQUEST

YOU ARE REQUIRED TO SUBMIT YOUR OFFER, BID, OR QUOTE VIA PAPERLESS ELECTRONIC MEDIA. SEE THE PROVISION ENTITLED "ELECTRONIC OFFERS (OR 'QUOTES' OR 'BIDS') REQUIRED IN RESPONSE TO THIS SOLICITATION (OR 'REQUEST FOR QUOTATIONS')" FOR MORE SPECIFIC INFORMATION.

[End of provision]

## SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

ADDED	CS7947	TACOM	01-JUL-95	SUPPLEMENTAL STATEMENT OF WORK: TAILORING OF MIL-L-61002 TO ELIMINATE USE OF CIODS
ADDED	CS7948	TACOM	01-JUL-95	SUPPLEMENTAL STATEMENT OF WORK: TAILORING OF MIL-STD-129 TO ELIMINATE USE OF CIODS
AUTO	CS7200	52.239-4001 (TACOM)	01-MAY-99	YEAR 2000 (Y2K) COMPLIANCE

## SECTION D - PACKAGING AND MARKING

ADDED	DS7041	52.247-4003 (TACOM)	01-OCT-97	CLEARANCE AND DOCUMENTATION REQUIREMENTS--SHIPMENTS THROUGH THE DEFENSE TRANSPORTATION SYSTEM (DTS) FROM OCONUS CONTRACTOR FACILITIES (F.O.B. ORIGIN)
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## SECTION E - INSPECTION AND ACCEPTANCE

ADDED	EF0201	52.246-5	01-APR-84	INSPECTION OF SERVICES - COST-REIMBURSEMENT
ADDED	EF0206	52.246-8	01-APR-84	INSPECTION OF RESEARCH AND DEVELOPMENT -- COST-REIMBURSEMENT

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CHANGED ES6341 52.246-4024 01-SEP-92 SUBSTITUTING COMMERCIAL TEST RESULTS FOR REQUIRED CONTRACT TESTS (TACOM)

1. GENERAL. At your request, we may delete all or some of the Government or contractor conducted tests required by this contract, under the following conditions:

a. You have (or your supplier has) previously supplied the identical item to us and we've accepted it, or:

b. You have commercial test reports, performance data, analytical data, or vendor reports demonstrating that the item meets the contract requirements.

2. HOW TO SUBMIT A TEST DELETION REQUEST.

a. BEFORE CONTRACT AWARD - Submit your request along with your bid or proposal. Make sure that your bid or proposal includes an alternate price (that reflects how your basic price would change if we approved your request).

b. AFTER CONTRACT AWARD - Send your requests to (USA TACOM, Warren, MI 48397-5000, ATTN: AMSTA-LC-CAPA at least 45 days before you're scheduled to make delivery of the affected end item.

c. ALL REQUESTS MUST -

- (1) identify the test(s) you want deleted;
- (2) state the basis for your request;
- (3) include a list of configuration changes made;
- (4) demonstrate that you meet the conditions in paragraph 1a or 1b above;
- (5) include proposed amount of equitable adjustment (if change is requested after award)

3. SUPPORTING DATA. If we agree to delete a test or tests, you must keep the data you used to support your request for four years from the day we approved your request. You must provide us with this data if we ask for it.

4. CONTRACT ADJUSTMENT. If we agree to delete a test or tests after contract award, we may negotiate an equitable adjustment in the contract price, under the Changes clause of this contract.

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ADDED	ES7444	52.246-4025, ALT I (TACOM)	01-OCT-97	HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT--TACOM QUALITY SYSTEM REQUIREMENT (NEW DESIGN/DESIGN CONTROL/COMPLEX OR CRITICAL ITEM)
ADDED	ES7001	52.246-4028 (TACOM)	01-FEB-94	INSPECTION POINT: ORIGIN
ADDED	ES7002	52.246-4029 (TACOM)	01-FEB-98	ACCEPTANCE POINT: ORIGIN
ADDED	ES7028	52.211-4069 (TACOM)	01-SEP-97	WELDING INSPECTOR QUALIFICATION REQUIREMENTS

#### SECTION F - DELIVERIES OR PERFORMANCE

ADDED	FF0004	52.247-29	01-JUN-88	F.O.B. ORIGIN
ADDED	FF0034	52.247-58	01-APR-84	LOADING, BLOCKING, AND BRACING OF FREIGHT CAR SHIPMENTS
ADDED	FF0035	52.247-59	01-APR-84	F.O.B. ORIGIN--CARLOAD AND TRUCKLOAD SHIPMENTS
AUTO	FF7133	52.242-15	01-APR-84	STOP-WORK ORDER (AUG 1989) (ALTERNATE I (APR 1984))
ADDED	FS7515	52.227-4002 (TACOM)	01-APR-85	DATA (SOFTWARE)
ADDED	FS7446	52.247-4005 (TACOM)	01-OCT-94	SHIPMENT OF SUPPLIES AND DETENTION OF CARRIERS EQUIPMENT

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## SECTION G - CONTRACT ADMINISTRATION DATA

AUTO	GS7001	52.204-7008 (TACOM)	01-JUN-99	MANDATORY USE OF GOVERNMENT TO GOVERNMENT ELECTRONIC COMMUNICATION
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## SECTION H - SPECIAL CONTRACT REQUIREMENTS

ADDED	HA0803	252.204-7000	01-DEC-91	DISCLOSURE OF INFORMATION
AUTO	HA0804	252.205-7000	01-DEC-91	PROVISION OF INFORMATION TO COOPERATIVE AGREEMENT HOLDERS
ADDED	HA0834	252.211-7000	01-DEC-91	ACQUISITION STREAMLINING
AUTO	HA0873	252.231-7000	01-DEC-91	SUPPLEMENTAL COST PRINCIPLES
AUTO	HA0871	252.246-7000	01-DEC-91	MATERIAL INSPECTION AND RECEIVING REPORT
ADDED	HA0851	252.251-7000	01-MAY-95	ORDERING FROM GOVERNMENT SUPPLY SOURCES
AUTO	HA0853	252.225-7001	01-MAR-98	BUY AMERICAN ACT AND BALANCE OF PAYMENTS PROGRAM
ADDED	HA0824	252.234-7001	01-MAR-98	EARNED VALUE MANAGEMENT SYSTEM
AUTO	HA0805	252.246-7001	01-DEC-91	WARRANTY OF DATA
ADDED	HA0802	252.203-7002	01-DEC-91	DISPLAY OF DOD HOTLINE POSTER
ADDED	HA0870	252.204-7002	01-DEC-91	PAYMENT FOR SUBLINE ITEMS NOT SEPARATELY PRICED
AUTO	HA0830	252.225-7002	01-DEC-91	QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS
ADDED	HA0859	252.249-7002	01-DEC-96	NOTIFICATION OF ANTICIPATED CONTRACT TERMINATION OR REDUCTION
AUTO	HA0809	252.242-7004	01-SEP-96	MATERIAL MANAGEMENT AND ACCOUNTING SYSTEM
AUTO	HA0818	252.225-7009	01-MAR-98	DUTY-FREE-ENTRY--QUALIFYING COUNTRY SUPPLIES (END PRODUCTS AND COMPONENTS)
AUTO	HA0816	252.225-7010	01-MAR-98	DUTY-FREE ENTRY--ADDITIONAL PROVISIONS
ADDED	HA0823	252.235-7011	01-SEP-99	FINAL SCIENTIFIC OR TECHNICAL REPORT
ADDED	HA7815	252.243-7000	01-SEP-99	ENGINEERING CHANGE PROPOSALS
AUTO	HA7390	252.227-7036	01-JAN-97	DECLARATION OF TECHNICAL DATA CONFORMITY
AUTO	HA7392	252.227-7037	01-SEP-99	VALIDATION OF RESTRICTIVE MARKINGS ON TECHNICAL DATA
AUTO	HS7101	52.204-4005 (TACOM)	01-DEC-99	REQUIRED USE OF ELECTRONIC COMMERCE
ADDED	HS7130	52.216-4008 (TACOM)	01-JUN-89	STATUS OF FUNDS ON COST REIMBURSEMENT CONTRACTS/CLINS
AUTO	HS7301	52.246-4026 (TACOM)	01-SEP-99	LOCAL ADDRESSES FOR DD FORM 250

## SECTION I - CONTRACT CLAUSES

AUTO	IF0001	52.202-1	01-OCT-95	DEFINITIONS
AUTO	IF0076	52.222-1	01-FEB-97	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES



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AUTO	IF0062	52.226-1	01-FEB-00	UTILIZATION OF INDIAN ORGANIZATIONS AND INDIAN-OWNED ECONOMIC ENTERPRISES
AUTO	IF0343	52.227-1	01-APR-84	AUTHORIZATION AND CONSENT (ALTERNATE I (JUL 1995))
AUTO	IF0136	52.233-1	01-DEC-98	DISPUTES
AUTO	IF0140	52.242-1	01-APR-84	NOTICE OF INTENT TO DISALLOW COSTS
ADDED	IF0229	52.247-1	01-APR-84	COMMERCIAL BILL OF LADING NOTATIONS the notation set forth in paragraph (a) of the clause applies in this contract.' The agency name in line one of the notation shall read:US ARMY TANK-AUTOMOTIVE & ARMAMENTS COMMAND
ADDED	IF0260	52.251-1	01-APR-84	GOVERNMENT SUPPLY SOURCES
AUTO	IF0651	52.253-1	01-JAN-91	COMPUTER GENERATED FORMS
ADDED	IF0006	52.204-2	01-AUG-96	SECURITY REQUIREMENTS
AUTO	IF0022	52.215-2	01-JUN-99	AUDIT AND RECORDS - NEGOTIATIONS
AUTO	IF0334	52.227-2	01-AUG-96	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
ADDED	IF0113	52.230-2	01-APR-98	COST ACCOUNTING STANDARDS
ADDED	IF0141	52.242-2	01-APR-91	PRODUCTION PROGRESS REPORTS
AUTO	IF0158	52.243-2	01-AUG-87	CHANGES--COST-REIMBURSEMENT (ALTERNATE V (APR 1984))
AUTO	IF0163	52.244-2	01-AUG-98	SUBCONTRACTS (ALT I--AUG 1998)
AUTO	IF0004	52.203-3	01-APR-84	GRATUITIES
ADDED	IF0094	52.223-3	01-JAN-97	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA
ADDED	IF0355	52.227-3	01-APR-84	PATENT INDEMNITY
ADDED	IF0115	52.230-3	01-APR-98	DISCLOSURE AND CONSISTENCY OF COST ACCOUNTING PRACTICES this clause applies only when the Contractor has been determined eligible. See Section K.
AUTO	IF0350	52.233-3	01-AUG-96	PROTEST AFTER AWARD -- (ALTERNATE I, dated JUN 1985)
AUTO	IF0732	52.242-3	01-OCT-95	PENALTIES FOR UNALLOWABLE COSTS
AUTO	IF0772	52.204-4	01-JUN-96	PRINTING/COPYING DOUBLE-SIDED ON RECYCLED PAPER
ADDED	IF0733	52.242-4	01-JAN-97	CERTIFICATION OF INDIRECT COSTS
AUTO	IF0005	52.203-5	01-APR-84	COVENANT AGAINST CONTINGENT FEES
ADDED	IF0015	52.211-5	01-OCT-97	MATERIAL REQUIREMENTS
ADDED	IF0519	52.223-5	01-APR-98	POLLUTION PREVENTION AND RIGHT-TO-KNOW INFORMATION
AUTO	IF0166	52.244-5	01-DEC-96	COMPETITION IN SUBCONTRACTING
AUTO	IF0174	52.245-5	01-JAN-86	GOVERNMENT PROPERTY (COST-REIMBURSEMENT, TIME-AND-MATERIAL, OR LABOR-HOUR CONTRACTS) (Deviation, per DAR Tracking Number 99-00008, 13 July 99)
AUTO	IF0165	52.203-6	01-JUL-95	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT
AUTO	IF0964	52.209-6	01-JUL-95	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH

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## CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT

AUTO	IF0295	52.223-6	01-JAN-97	DRUG FREE WORKPLACE
ADDED	IF0114	52.230-6	01-NOV-99	ADMINISTRATION OF COST ACCOUNTING STANDARDS
ADDED	IF0160	52.243-6	01-APR-84	CHANGE ORDER ACCOUNTING
AUTO	IF0246	52.249-6	01-SEP-96	TERMINATION (COST-REIMBURSEMENT)
AUTO	IF0008	52.203-7	01-JUL-95	ANTI-KICKBACK PROCEDURES
AUTO	IF0035	52.216-7	01-APR-98	ALLOWABLE COST AND PAYMENT
AUTO	IF0106	52.228-7	01-MAR-96	INSURANCE--LIABILITY TO THIRD PERSONS
AUTO	IF0161	52.243-7	01-APR-84	NOTIFICATION OF CHANGES
AUTO	IF0314	52.203-8	01-JAN-97	CANCELLATION, RESCISSION AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY
AUTO	IF0276	52.215-8	01-OCT-97	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT
AUTO	IF0069	52.219-8	01-OCT-99	UTILIZATION OF SMALL BUSINESS CONCERNS
ADDED	IF0299	52.225-8	01-FEB-00	DUTY-FREE ENTRY
ADDED	IF0026	52.215-9	01-OCT-97	CHANGES OR ADDITIONS TO MAKE-OR-BUY PROGRAM (ALTERNATE II (1997 OCT))
AUTO	IF0070	52.219-9	01-OCT-99	SMALL BUSINESS SUBCONTRACTING PLAN
ADDED	IF0124	52.232-9	01-APR-84	LIMITATION ON WITHHOLDING OF PAYMENTS
AUTO	IF0723	52.203-10	01-JAN-97	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY
AUTO/DEL	IF0027	52.215-10	01-OCT-97	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA
ADDED	IF0366	52.227-10	01-APR-84	FILING OF PATENT APPLICATIONS--CLASSIFIED SUBJECT MATTER
ADDED	IF0144	52.242-10	01-APR-84	F.O.B. ORIGIN--GOVERNMENT BILLS OF LADING OR PREPAID POSTAGE
ADDED	IF0028	52.215-11	01-OCT-97	PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA--MODIFICATIONS
AUTO	IF0098	52.225-11	01-AUG-98	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
AUTO	IF0023	52.203-12	01-JUN-97	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
AUTO/DEL	IF0029	52.215-12	01-OCT-97	SUBCONTRACTOR COST OR PRICING DATA
ADDED	IF0372	52.227-12	01-JAN-97	PATENT RIGHTS--RETENTION BY THE CONTRACTOR (LONG FORM)
ADDED	IF0146	52.242-12	01-JUL-95	REPORT OF SHIPMENT (REPSHIP)
ADDED	IF0030	52.215-13	01-OCT-97	SUBCONTRACTOR COST OR PRICING DATA -- MODIFICATIONS
ADDED	IF0011	52.225-13	01-FEB-00	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
AUTO	IF0142	52.242-13	01-JUL-95	BANKRUPTCY
AUTO	IF0512	52.223-14	01-OCT-96	TOXIC CHEMICAL RELEASE REPORTING
AUTO	IF0257	52.249-14	01-APR-84	EXCUSABLE DELAYS
ADDED	IF0017	52.211-15	01-SEP-90	DEFENSE PRIORITY AND ALLOCATION REQUIREMENTS

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AUTO	IF0777	52.219-16	01-JAN-99	LIQUIDATED DAMAGES - SUBCONTRACTING PLAN
AUTO	IF0128	52.232-17	01-JUN-96	INTEREST
ADDED	IF0192	52.245-18	01-FEB-93	SPECIAL TEST EQUIPMENT
ADDED	IF0193	52.245-19	01-APR-84	GOVERNMENT PROPERTY FURNISHED AS-IS
AUTO	IF0081	52.222-20	01-DEC-96	WALSH-HEALEY PUBLIC CONTRACTS ACT
AUTO/DEL	IF0129	52.232-20	01-APR-84	LIMITATION OF COST
ADDED	IF0131	52.232-22	01-APR-84	LIMITATION OF FUNDS
AUTO	IF0133	52.232-23	01-JAN-86	ASSIGNMENT OF CLAIMS
AUTO/DEL	IF0226	52.246-23	01-FEB-97	LIMITATION OF LIABILITY
ADDED	IF0227	52.246-24	01-FEB-97	LIMITATION OF LIABILITY--HIGH-VALUE ITEMS
AUTO	IF0362	52.232-25	01-JUN-97	PROMPT PAYMENT
AUTO	IF0082	52.222-26	01-FEB-99	EQUAL OPPORTUNITY
ADDED	IF0083	52.222-28	01-APR-84	EQUAL OPPORTUNITY PREAWARD CLEARANCE OF SUBCONTRACTS
AUTO	IF0703	52.232-33	01-MAY-99	PAYMENT BY ELECTRONIC FUNDS TRANSFER--CENTRAL CONTRACTOR REGISTRATION
AUTO	IF0085	52.222-35	01-APR-98	AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA
AUTO	IF0087	52.222-36	01-JUN-98	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES
AUTO	IF0088	52.222-37	01-JAN-99	EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA
AUTO	IA0893	252.209-7000	01-NOV-95	ACQUISITION FROM SUBCONTRACTORS SUBJECT TO ON-SITE INSPECTION UNDER THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY
AUTO	IA0897	252.215-7000	01-DEC-91	PRICING ADJUSTMENTS
ADDED	IA0860	252.242-7000	01-DEC-91	POSTAWARD CONFERENCE
AUTO	IA0408	252.244-7000	01-FEB-97	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS (DoD CONTRACTS)
AUTO	IA0280	252.203-7001	01-MAR-99	PROHIBITION ON PERSONS CONVICTED OF FRAUD OR OTHER DEFENSE CONTRACT-RELATED FELONIES
ADDED	IA0888	252.215-7002	01-OCT-98	COST ESTIMATING SYSTEM REQUIREMENTS
AUTO	IA0821	252.204-7003	01-APR-92	CONTROL OF GOVERNMENT PERSONNEL WORK PRODUCT
AUTO	IA0872	252.219-7003	01-APR-96	SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (DOD CONTRACTS)
ADDED	IA0890	252.242-7003	01-DEC-91	APPLICATION FOR U.S. GOVERNMENT SHIPPING DOCUMENTATION/INSTRUCTIONS
AUTO	IA0222	252.209-7004	01-MAR-98	SUBCONTRACTING WITH FIRMS THAT ARE OWNED OR CONTROLLED BY THE GOVERNMENT OF A TERRORIST COUNTRY per DoD interim rule, Federal Register 27 Mar 98
ADDED	IA0936	252.223-7004	01-SEP-88	DRUG-FREE WORK FORCE
AUTO	IA0015	252.211-7005	01-MAR-99	SUBSTITUTIONS FOR MILITARY OR FEDERAL SPECIFICATIONS AND STANDARDS

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ADDED	IA0891	252.242-7005	01-MAR-98	COST/SCHEDULE STATUS REPORT
AUTO	IA0828	252.225-7012	01-MAY-99	PREFERENCE FOR CERTAIN DOMESTIC COMMODITIES
ADDED	IA0350	252.227-7013	01-NOV-95	RIGHTS IN TECHNICAL DATA --NONCOMMERCIAL ITEMS
AUTO	IA0885	252.225-7014	01-MAR-98	PREFERENCE FOR DOMESTIC SPECIALTY METALS (ALT 1)
ADDED	IA0619	252.227-7014	01-JUN-95	RIGHTS IN NONCOMMERCIAL COMPUTER SOFTWARE AND NONCOMMERCIAL COMPUTER SOFTWARE DOCUMENTATION
AUTO	IA0829	252.225-7016	01-AUG-98	RESTRICTION ON ACQUISITION OF BALL AND ROLLER BEARINGS
ADDED	IA0624	252.227-7016	01-JUN-95	RIGHTS IN BID OR PROPOSAL INFORMATION
AUTO	IA0017	252.225-7017	01-FEB-00	PROHIBITION ON AWARD TO COMPANIES OWNED BY THE PEOPLE'S REPUBLIC OF CHINA
ADDED	IA0633	252.227-7020	01-JUN-95	RIGHTS IN SPECIAL WORKS
ADDED	IA0850	252.225-7022	01-JUN-97	RESTRICTION ON ACQUISITION OF POLYACRYLONITRILE (PAN) CARBON FIBER
AUTO	IA0852	252.225-7025	01-JUN-97	RESTRICTION ON ACQUISITION OF FORGINGS
ADDED	IA0634	252.227-7025	01-JUN-95	LIMITATIONS ON THE USE OR DISCLOSURE OF GOVERNMENT-FURNISHED INFORMATION MARKED WITH RESTRICTIVE LEGENDS
AUTO	IA0812	252.225-7026	01-MAR-98	REPORTING OF CONTRACT PERFORMANCE OUTSIDE THE UNITED STATES
ADDED	IA0373	252.227-7026	01-APR-88	DEFERRED DELIVERY OF TECHNICAL DATA OR COMPUTER SOFTWARE
ADDED	IA0374	252.227-7027	01-APR-88	DEFERRED ORDERING OF TECHNICAL DATA OR COMPUTER SOFTWARE
ADDED	IA0652	252.225-7030	01-OCT-92	RESTRICTION ON ACQUISITION OF CARBON, ALLOY, AND ARMOR STEEL PLATE
AUTO	IA0379	252.227-7030	01-OCT-88	TECHNICAL DATA--WITHHOLDING OF PAYMENT
AUTO	IA0654	252.225-7031	01-JUN-92	SECONDARY ARAB BOYCOTT OF ISRAEL

AUTO/CHANGE IF6077 52.222-2 01-JUL-90 PAYMENT FOR OVERTIME PREMIUMS

(a) The use of overtime is authorized under this contract if the overtime premium cost does not exceed the amount negotiated or the overtime premium is paid for work--

(1) Necessary to cope with emergencies such as those resulting from accidents, natural disasters, breakdown of production equipment, or occasional production bottlenecks of a sporadic nature;

(2) By indirect-labor employees such as those performing duties in connection with administration, protection, transportation, maintenance, standby plant protection, operation of utilities, or accounting;

(3) To perform tests, industrial processes, laboratory procedures, loading or unloading of transportation conveyances, and operations in flight or afloat that are continuous in nature and cannot reasonably be interrupted or completed otherwise; or

(4) That will result in lower overall costs to the Government.

(b) Any request for estimated overtime premiums that exceeds the amount specified above shall include all estimated overtime for contract completion and shall--

(1) Identify the work unit; e.g., department or section in which the requested overtime will be used, together with present workload, staffing, and other data of the affected unit sufficient to permit the Contracting Officer to evaluate the necessity for the overtime;

(2) Demonstrate the effect that denial of the request will have on the contract delivery or performance schedule;

(3) Identify the extent to which approval of overtime would affect the performance or payments in connection with other Government contracts, together with identification of each affected contract; and

(4) Provide reasons why the required work cannot be performed by using multishift operations or by employing additional personnel.

(End of clause)

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CHANGED IF6555 52.223-7 01-JAN-97 NOTICE OF RADIOACTIVE MATERIALS

(a) The Contractor shall notify the Contracting Officer or designee, in writing 20 days prior to the delivery of, or prior to completion of any servicing required by this contract of, items containing either (1) radioactive material requiring specific licensing under the regulations issued pursuant to the Atomic Energy Act of 1954, as amended, as set forth in Title 10 of the Code of Federal Regulations, in effect on the date of this contract, or (2) other radioactive material not requiring specific licensing in which the specific activity is greater than 0.002 microcuries per gram or the activity per item equals or exceeds 0.01 microcuries. Such notice shall specify the part or parts of the items which contain radioactive materials, a description of the materials, the name and activity of the isotope, the manufacturer of the materials, and any other information known to the Contractor which will put users of the items on notice as to the hazards involved (OMB No. 9000-0107).

(b) If there has been no change affecting the quantity of activity, or the characteristics and composition of the radioactive material from deliveries under this contract or prior contracts the Contractor may request that the Contracting Officer or designee waive the notice requirement in paragraph (a) of this clause. Any such request shall-

(1) Be submitted in writing;

(2) State that the quantity of activity, characteristics, and composition of the radioactive material have not changed; and

(3) Cite the contract number on which the prior notification was submitted and the contracting office to which it was submitted.

(c) All items, parts, or subassemblies which contain radioactive materials in which the specific activity is greater than 0.002 microcuries per gram or activity per item equals or exceeds 0.01 microcuries, and all containers in which such items, parts or subassemblies are delivered to the Government shall be clearly marked and labeled as required by the latest revision of MIL-STD 129 in effect on the date of the contract.

(d) This clause, including this paragraph (d), shall be inserted in all subcontracts for radioactive materials meeting the criteria in paragraph (a) of this clause.

(End of clause)

AUTO/CHANGE IF6096 52.225-10 01-APR-84 DUTY-FREE ENTRY

(a) Except as otherwise approved by the Contracting Officer, no amount is or will be included in the contract price for any duties on supplies specifically identified in the Schedule to be accorded duty-free entry.

(b) Except for supplies listed in the Schedule to be accorded duty-free entry, and except as provided under any other clause of this contract or in paragraph (c) below, the following procedures apply:

(1) The Contractor shall notify the Contracting Officer in writing of any purchase of foreign supplies (including, without limitation, raw materials, components, and intermediate assemblies) in excess of \_\_\_\_\_ that are to be imported into the customs territory of the United States for delivery to the Government or for incorporation into end items to be delivered under this contract. The notice shall be furnished to the Contracting Officer at least 20 days before the importation and shall identify (i) the foreign supplies, (ii) the estimated amount of duty, and (iii) the country of origin.

(2) If the Contracting Officer determines that these supplies should be entered duty-free, the Contracting Officer shall notify the Contractor within ten days.

(3) Except as otherwise approved by the Contracting Officer, the contract price shall be reduced by (or the allowable cost shall not include) the amount of duty that would be payable if the supplies were not entered duty-free.

(c) Paragraph (b) above shall not apply to purchases of foreign supplies if (1) they are identical in nature with items purchased by the Contractor or any subcontractor in connection with its commercial business and (2) segregation of these supplies to ensure use only on Government contracts containing duty-free entry provisions is not economical or feasible.

(d) The Contractor warrants that all supplies for which duty-free entry is to be claimed are intended to be delivered to the Government or incorporated into the end items to be delivered under this contract, and that duty shall be paid to the extent that these supplies, or any portion of them, are diverted to non-Governmental use, other than as scrap or salvage or as a result of a competitive sale authorized by the Contracting Officer.

(e) The Government agrees to execute any required duty-free entry certificates for items specified in this contract or approved by the Contracting Officer and to assist the Contractor in obtaining duty-free entry of the supplies.

(f) All shipping documents covering the supplies to be entered duty-free shall consign the shipments to the contracting agency in care of the Contractor and shall include the delivery address of the Contractor (or contracting agency, if

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appropriate). The documents shall bear the following information:

- (1) Government prime contract number.
- (2) Identification of carrier.
- (3) The notation UNITED STATES GOVERNMENT, US ARMY TANK-AUTOMOTIVE AND ARMAMENTS COMMAND, Duty-free entry to be claimed pursuant to Item No(s)(from Tariff Schedules), Tariff Schedules of the United States (19 U.S.C. 1202). Upon arrival of shipment at port of entry, District Director of Customs, please release shipment under 19 CFR 142 and notify (cognizant contract administration office) for execution of Customs Forms 7501 and 7501-A and any required duty-free entry certificates.
- (4) Gross weight in pounds (if freight is based on space tonnage, state cubic feet in addition to gross shipping weight).
- (5) Estimated value in United States dollars.

(g) The Contractor agrees to instruct the foreign supplier to consign the shipment as specified in (f) above, to mark all packages with the words UNITED STATES GOVERNMENT, and the title of the contracting agency, and to accompany the shipment with at least two copies of the bill of lading (or other shipping document) for use by the District Director of Customs at the port of entry.

(h) The Contractor agrees to notify in writing the cognizant contract administration office immediately upon notification from the Contracting Officer that duty-free entry will be accorded (or, if the duty-free supplies were listed in the contract Schedule, upon award by the Contractor to the overseas supplier). The notice shall identify (1) the foreign supplies, (2) the country of origin, (3) the contract number, and (4) the scheduled delivery date(s).

- (i) The Contractor agrees to insert the substance of this clause in any subcontract under which--
- (1) There will be imported into the customs territory of the United States supplies identified in the Schedule as supplies to be accorded duty-free entry; or
  - (2) Other foreign supplies in excess of -2- may be imported into the customs territory of the United States.
- (End of clause)

CHANGED IF6215 52.215-21 01-OCT-97 REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA--MODIFICATIONS ```(ALTERNATE III (OCT 1997))

(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data for modifications under this contract, for price adjustments expected to exceed the threshold set forth at FAR 15.403-4 on the date of the agreement on price or the date of the award, whichever is later, the Contractor may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable--

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting office.

(ii) Information on modifications of contracts of subcontracts for commercial items.

(A) If--

(1) the original contract or subcontract was granted an exception from cost or pricing data requirements because the price agreed upon was based on adequate price competition, or prices set by law or regulation, or was a contract or subcontract for the acquisition of a commercial item, and

(2) the modification (to the contract or subcontract) is not exempted based on one of these exceptions, then the Contractor may provide information to establish that the modification would not change the contract or subcontract from a contract or subcontract for the acquisition of a commercial item to a contract or subcontract for the acquisition of an item other than a commercial item.

(B) For a commercial item exception, the Contractor shall provide, at a minimum, information on prices at which the same item or similar items have previously been sold that is adequate for evaluating the reasonableness of the price of the modification. Such information may include--

(1) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price or recent sales in quantities similar to the

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proposed quantities.

(2) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market.

(3) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(4) The Contractor grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this clause, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the Contractor's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the Contractor is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The Contractor shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions), the Contractor shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(c) Submit the cost portion of the proposal via the following electronic media: Electronic Spreadsheet files compatible with Excel 5.0 or earlier.

(End of clause)

ADDED	IF7298	52.234-1	01-DEC-94	INDUSTRIAL RESOURCES DEVELOPED UNDER DEFENSE PRODUCTION ACT TITLE III
AUTO	IF7238	52.244-6	01-OCT-98	SUBCONTRACTS FOR COMMERCIAL ITEMS AND COMMERCIAL COMPONENTS
AUTO	IF7262	52.252-6	01-APR-84	AUTHORIZED DEVIATIONS IN CLAUSES
ADDED	IF7812	52.208-8	01-JUN-97	HELIUM REQUIREMENT FORECAST AND REQUIRED SOURCES FOR HELIUM (JUN 1997)
ADDED	IF7403	52.223-9	01-OCT-97	CERTIFICATION AND ESTIMATE OF PERCENTAGE OF RECOVERED MATERIAL CONTENT FOR EPA DESIGNATED ITEMS
AUTO	IF7405	52.223-11	01-JUN-96	OZONE-DEPLETING SUBSTANCES
ADDED	IF7379	52.227-13	01-JUN-89	PATENT RIGHTS--ACQUISITION BY THE GOVERNMENT (ALTERNATE II)
ADDED	IA7848	252.248-7000	01-MAY-94	PREPARATION OF VALUE ENGINEERING CHANGE PROPOSALS
AUTO	IA7622	252.204-7004	01-SEP-99	REQUIRED CENTRAL CONTRACTOR REGISTRATION
AUTO	IA7809	252.225-7015	01-DEC-91	PREFERENCE FOR DOMESTIC HAND OR MEASURING TOOLS
AUTO	IA7807	252.247-7023	01-NOV-95	TRANSPORTATION OF SUPPLIES BY SEA
AUTO	IS7301	52.246-4026 (TACOM)	01-JAN-99	LOCAL ADDRESS FOR DD FORM 250
AUTO	IS7002	52.204-7009 (TACOM)	01-JUN-99	MANDATORY USE OF CONTRACTOR TO GOVERNMENT ELECTRONIC COMMUNICATIONS

#### SECTION K - REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

ADDED	KF0019	52.223-4	01-OCT-97	RECOVERED MATERIAL CERTIFICATION
AUTO	KA0221	252.209-7001	01-MAR-98	DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST

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COUNTRY per DoD interim rule, Federal Register 27 Mar 98

AUTO KA0298 252.227-7028 01-JUN-95 TECHNICAL DATA OR COMPUTER SOFTWARE PREVIOUSLY DELIVERED TO THE GOVERNMENT

AUTO/CHANGE KF6230 52.219-1 01-MAY-99 SMALL BUSINESS PROGRAM REPRESENTATIONS--ALTERNATE I (NOV 1999)

(a)

(1) The standard industrial classification (SIC) code for this acquisition is 3519.

(2) The small business size standard is 1000.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations.

(1) The offeror represents as part of its offer that it ( ) is,  
( ) is not,

a small business concern.

(2) [Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision. The offeror represents, for general statistical purposes, that it ( ) is,  
( ) is not,  
a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision. The offeror represents as part of its offer that it ( ) is,  
( ) is not,  
a women-owned small business concern.

(4) Complete only if offeror represented itself as small business concern in paragraph (b)(1) of this provision. The offeror represents, as part of its offer, that--

(i) It ( )\_is,  
( )\_is not

a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It ( )\_is,  
( )\_is not

a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(4)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. Enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: \_\_\_\_\_. Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(c) Definitions.

"Small business concern," as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

"Women-owned small business concern," as used in this provision, means a small business concern--

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be



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furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

- (i) Be punished by imposition of fine, imprisonment, or both;
- (ii) Be subject to administrative remedies, including suspension and debarment; and
- (iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

CHANGED KS6035 52.215-4005 01-OCT-85 MINIMUM ACCEPTANCE PERIOD  
 (a) ACCEPTANCE PERIOD, as used in this provision, means the number of calendar days available to the Government for awarding a contract from the date specified in this solicitation for receipt of offers.

(b) The Government requires a minimum acceptance period of 180 calendar days.

(c) In the space provided immediately below, offers may specify a longer acceptance period than the Government's minimum requirement.

?The offeror allows the following acceptance period: \_\_\_\_\_ calendar days.

(d) An offer allowing less than the Government's minimum acceptance period may be rejected.

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ADDED	KF7025	52.230-1	01-APR-98	COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION
AUTO	KF7070	52.204-3	01-OCT-98	TAXPAYER IDENTIFICATION
AUTO	KF7007	52.215-4	01-OCT-97	TYPE OF BUSINESS ORGANIZATION
AUTO	KF7730	52.204-5	01-MAY-99	WOMEN-OWNED BUSINESS OTHER THAN SMALL BUSINESS
AUTO	KF7400	52.209-5	01-MAR-96	CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS
AUTO	KF7733	52.204-6	01-JUN-99	DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER
AUTO	KF7009	52.215-6	01-OCT-97	PLACE OF PERFORMANCE
ADDED	KF7303	52.227-6	01-APR-84	ROYALTY INFORMATION
AUTO	KF7223	52.203-11	01-APR-91	CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS
AUTO	KF7511	52.223-13	01-OCT-96	CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING
AUTO	KF7015	52.222-21	01-FEB-99	PROHIBITION OF SEGREGATED FACILITIES
AUTO	KF7016	52.222-22	01-FEB-99	PREVIOUS CONTRACTS AND COMPLIANCE REPORTS
AUTO	KF7017	52.222-25	01-APR-84	AFFIRMATIVE ACTION COMPLIANCE
AUTO	KF7008	52.215-4010 (TACOM)	01-JAN-98	AUTHORIZED NEGOTIATORS

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AUTO	KA7850	252.225-7000	01-SEP-99	BUY AMERICAN ACT - BALANCE OF PAYMENTS PROGRAM CERTIFICATE
ADDED	KA7893	252.223-7001	01-DEC-91	HAZARD WARNING LABELS
ADDED	KA7818	252.209-7002	01-SEP-94	DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT
AUTO	KA7800	252.225-7003	01-MAR-98	INFORMATION FOR DUTY-FREE ENTRY EVALUATION
ADDED	KA7890	252.235-7010	01-MAY-95	ACKNOWLEDGMENT OF SUPPORT AND DISCLAIMER
AUTO	KA7806	252.247-7022	01-AUG-92	REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA
AUTO	KS7372	TACOM	01-APR-85	INVENTION IDENTIFICATION AND DISCLOSURE PROCEDURES
AUTO	KS7151	52.223-4002 (TACOM)	01-DEC-93	USE OF CLASS I OZONE-DEPLETING SUBSTANCES (CIODS)
ADDED	KS7031	52.211-4035 (TACOM)	01-JAN-88	PHOSPHATE COATING PROCEDURE APPROVAL
AUTO	KS7413	52.204-7005 (TACOM)	01-NOV-96	OFFEROR'S DATAFAX NUMBER AND E-MAIL ADDRESS

## SECTION L - INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS

AUTO	LF0019	52.215-1	01-FEB-00	INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (ALTERNATE II) (OCT 1997)
ADDED	LF0104	52.211-2	01-DEC-99	AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L
AUTO	LF0040	52.222-24	01-FEB-99	PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE REVIEW
AUTO	LF0009	52.214-34	01-APR-91	SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE
AUTO	LF0114	52.214-35	01-APR-91	SUBMISSION OF OFFERS IN U.S. CURRENCY
ADDED	LA0811	252.234-7000	01-MAR-98	NOTICE OF EARNED VALUE MANAGEMENT SYSTEM
AUTO	LA0842	252.204-7001	01-AUG-99	COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING
ADDED	LA0407	252.242-7006	01-MAR-97	COST/SCHEDULE STATUS REPORT PLANS
AUTO/CHANGE	LF6001	52.216-1	01-APR-84	TYPE OF CONTRACT

The Government contemplates award of a cost plus award fee contract resulting from this solicitation.  
(End of provision)

CHANGED	LF6204	52.215-20	01-OCT-97	REQUIREMENTS FOR COST OR PRICING DATA OR INFORMATION OTHER THAN COST OR PRICING DATA (ALTERNATE III, OCT 1997)
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(a) Exceptions from cost or pricing data.

(1) In lieu of submitting cost or pricing data, offerors may submit a written request for exception by submitting the information described in the following subparagraphs. The Contracting Officer may require additional supporting information, but only to the extent necessary to determine whether an exception should be granted, and whether the price is fair and reasonable.

(i) Identification of the law or regulation establishing the price offered. If the price is controlled under law by periodic rulings, reviews, or similar actions of a governmental body, attach a copy of the controlling document, unless it was previously submitted to the contracting officer.

(ii) Commercial item exception. For a commercial item exception, the offeror shall submit, at a minimum,

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information on prices at which the same item or similar items have previously been sold in the commercial market that is adequate for evaluating the reasonableness of the price for this acquisition. Such information may include--

(A) For catalog items, a copy of or identification of the catalog and its date, or the appropriate pages for the offered items, or a statement that the catalog is on file in the buying office to which the proposal is being submitted. Provide a copy or describe current discount policies and price lists (published or unpublished), e.g., wholesale, original equipment manufacturer, or reseller. Also explain the basis of each offered price and its relationship to the established catalog price, including how the proposed price relates to the price of recent sales in quantities similar to the proposed quantities;

(B) For market-priced items, the source and date or period of the market quotation or other basis for market price, the base amount, and applicable discounts. In addition, describe the nature of the market;

(C) For items included on an active Federal Supply Service Multiple Award Schedule contract, proof that an exception has been granted for the schedule item.

(2) The offeror grants the Contracting Officer or an authorized representative the right to examine, at any time before award, books, records, documents, or other directly pertinent records to verify any request for an exception under this provision, and the reasonableness of price. For items priced using catalog or market prices, or law or regulation, access does not extend to cost or profit information or other data relevant solely to the offeror's determination of the prices to be offered in the catalog or marketplace.

(b) Requirements for cost or pricing data. If the offeror is not granted an exception from the requirement to submit cost or pricing data, the following applies:

(1) The offeror shall submit cost or pricing data and supporting attachments in accordance with Table 15-2 of FAR 15.408.

(2) As soon as practicable after agreement on price, but before contract award (except for unpriced actions such as letter contracts), the offeror shall submit a Certificate of Current Cost or Pricing Data, as prescribed by FAR 15.406-2.

(c) Submit the cost portion of the proposal via the following electronic media: Electronic Spreadsheet format compatible with Excel 5.0 or earlier.

(End of Provision)

AUTO/DEL	LF7104	52.211-2	01-DEC-99	AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L
AUTO	LF7300	52.233-2	01-AUG-96	SERVICE OF PROTEST
ADDED	LF7107	52.211-14	01-SEP-90	NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE
AUTO	LM7015	52.233-4001 (TACOM)	01-MAY-98	HQ-AMC LEVEL PROTEST PROCEDURES
AUTO	LS7040	52.233-4000 (TACOM)	01-AUG-99	NOTICE REGARDING TACOM OMBUDSPERSON AND AMC-LEVEL PROTEST PROGRAM
AUTO	LS7001	52.215-4003 (TACOM)	01-SEP-99	HANDCARRIED OFFERS - INCLUDING OFFERS DELIVERED BY EXPRESS SERVICES (NON-US POSTAL SERVICE MAIL)
AUTO	LS7011	52.219-4003 (TACOM)	01-JUN-97	HELP FOR SMALL, DISADVANTAGED AND WOMAN-OWNED FIRMS
ADDED	LS7385	52.219-4005 (TACOM)	01-FEB-99	SUBMISSION OF SUBCONTRACTING PLAN
CHANGED	LS7431	52.211-4036 (TACOM)	01-MAY-99	FORMAT OF THE TECHNICAL DATA PACKAGE (TDP)

(a) The TDP for the contract item is available only in electronic format via the Acquisition Center's Solicitation Webpage ([www.tacom.army.mil/acqcen](http://www.tacom.army.mil/acqcen)). TACOM-Warren has discontinued its practice of providing free hard copies (i.e. paper, CD ROM) of

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technical data packages (TDPs). You must obtain a copy of the TDP for this solicitation via the Acquisition Center's Solicitation Webpage. For those TDPs not available via the webpage, the TDP will be issued free of charge in CD-ROM format. The CD-ROM includes the necessary software to access, view, and print individual images that are included in the TDP. The CD-ROM can be read in any personal computer that includes a CD-ROM drive.

(b) TDPs available via the Acquisition Center's Solicitation Webpage may be purchased in CD ROM format for a fee of \$4.60 each. Requests for CD ROMs and payment should be mailed to:

USATACOM  
AMSTA-AQ-DS (TDP Requests)  
Warren, MI 48397-5000

Make checks payable to the United States Treasury. Points of Contact for this initiative: Terri McGregor at (810) 574-7058 or Rick Khouri at (810) 574-7064.

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AUTO/CHANGE LS7850 52.215-4850 01-MAR-00 ELECTRONIC OFFERS REQUIRED IN RESPONSE TO THIS SOLICITATION

1. You must submit your offer via paperless electronic media (See Paragraph 2 below.). Offers submitted only in paper form are unacceptable (except as noted/required elsewhere in Section L of this document). You must submit your electronic offer, and any supplemental information (such as spreadsheets, backup data, and technical information), using any of the following electronic formats:

(i) Files readable using these Microsoft\* 97 Office Products (TACOM can currently read OFFICE 97\* and lower.): Word, Excel, Powerpoint, or Access. Spreadsheets must be sent in a file format that includes all formulae, macro and format information. Print image is not acceptable.

(ii) Files in Adobe PDF (Portable Document Format).

(iii) Files in HTML (Hypertext Markup Language). HTML documents must not contain active links to live Internet sites or pages. All linked information must be contained within your electronic offer and be accessible offline.

(iv) Other electronic formats. Before preparing your offer in any other electronic format, please e-mail the buyer identified in Block 10 of the solicitation cover sheet (Government Standard Form 33), with e-mail copy-furnished to amsta-idq@tacom.army.mil, to obtain a decision as to the format's acceptability. This e-mail must be received by the buyer not later than ten calendar days before the closing date. Failure to e-mail the buyer within this timeframe to seek an alternate format's acceptability may result in rejection of your offer. All alternate methods must be at no cost to the Government.

NOTE: The above formats may be submitted in compressed form using self-extracting files.

2. Acceptable media: You must submit your offer via 100 megabyte Zip\*-disk, or 3 1/2 inch disk, or 650 megabyte CD ROM, or E-mail. Identify the software application, and version, that you used to create each file submitted.

(a) 100 MEGABYTE ZIP\*-DISK, 3 1/2 INCH DISK, OR 650 MEGABYTE CD ROM via U.S. Mail or other carrier. Offerors shall label any and all submitted disks with the solicitation number and closing date, and the offeror's name and address and contact phone number. Envelopes containing disks must be labeled per FAR 52.215-1(c), found within the provision, "Instructions to Offerors--Competitive Acquisition", listed in Section L. Your attention is also called to the entirety of that provision--all contained therein is applicable to paperless electronic offers. In the event of multiple submitted offers, place each offer/submission on its own disk(s)(one offer can comprise multiple disks). You must also submit only one offer/submission per envelope. Notwithstanding language in Block 9 of the SF 33 cover sheet of this solicitation that may state otherwise, submit ONLY ONE (1) of each disk (no additional copies required).

(b) E-MAIL. If you choose to use e-mail, address your offer to offers@tacom.army.mil. DO NOT E-MAIL OFFERS TO THE BUYER. THE SUBJECT LINE OF THE E-MAIL MUST READ: "OFFER--[solicitation number], [name of Company/offeror], CLOSES [closing date]". Maximum size of each e-mail message shall be three and one-half (3.5) megabytes. Any compressed files must be self-extracting, and you must provide appropriate instructions. You may use multiple e-mail messages for each offer/submission, however, you must annotate the subject lines as described above for each message, and number them in this manner: "Message 1 of 3, 2 of 3, 3 of 3".

Please select only one medium by which to transmit each offer. For instance, do not submit an offer via 100 megabyte Zip\*-disk AND e-mail.

3. Lateness rules for submitted disks or e-mail submissions are outlined in FAR 52.215-1, "Instructions to Offerors--Competitive Acquisition", listed in Section L of this solicitation. Pay particular attention to paragraph (c)(3) of that clause as it relates to the timing of submissions.

4. Security Note: If you choose to password-protect access to your offer, you must provide the password to TACOM before the

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closing date. Contact the buyer identified in Block 10 of the SF33 solicitation cover sheet to arrange a means of providing it. Passwords used only for the purpose of write protecting files need not be provided.

5. Electronic offers must include, as a minimum:

(a) The SF33 cover sheet filled out. SIGNATURE: For offers submitted via disk or CD ROM per 2(a) above, this SF 33 cover sheet must be signed and included electronically in your disk or CD. Clearly label the disc/CD ROM as described in paragraph 2(a) above, adding the name and title of the signer authorizing your company, your company name, and then sign the LABEL itself. Authentication for e-mailed offers is verified by the offeror's return e-mail address.

(b) All applicable fill-in provisions from Sections A, B, F, and K of this solicitation. Also, Section E provision filled in (if applicable): Inspection Point: Origin, TACOM clause 52.246-4028. All applicable fill-ins must be completed and submitted by the offeror.

(c) A statement of agreement to all the terms, conditions, and provisions of this solicitation.

(d) Any other information required by the solicitation.

6. Please see FAR 15.207(c) for a description of the steps the Government shall take with regard to unreadable offers.

7. Offerors shall make every effort to ensure that their offer is virus-free. Offers (or portions thereof) submitted which DO reflect the presence of a virus, or which are otherwise rendered unreadable by damage in either physical or electronic transit, shall be treated as "unreadable" per paragraph 6 above.

\*Registered trademark

[End of provision]

AUTO	LS7101	52.204-7011	01-JUL-99	ELECTRONIC COMMERCE REQUIREMENTS
		(TACOM)		

SECTION M - EVALUATION FACTORS FOR AWARD

ADDED	MS7551	52.246-4039	01-FEB-98	PRICE EVALUATION FACTOR: SUBSTITUTION OR DELETION OF GOVERNMENT
		(TACOM)		QUALITY TESTING